

THERAPEUTIC SARCOGNOMY,

A SCIENTIFIC EXPOSITION OF THE MYSTERIOUS UNION OF

SOUL, BRAIN AND BODY,

— AND A —

NEW SYSTEM OF THERAPEUTIC PRACTICE WITHOUT MEDICINE, BY THE VITAL
NERVAURA, ELECTRICITY AND EXTERNAL APPLICATIONS, GIVING
THE ONLY SCIENTIFIC BASIS FOR THERAPEUTIC MAGNETISM AND ELECTRO-THERAPEUTICS.

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DESIGNED FOR THE USE OF



Nervauric and Electric Practitioners, and also for intelligent families, for the prevention and cure of disease, and moral and physical development of youth.

VOLUME 1ST — NERVAURIC AND ELECTRIC.

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PREFACE.

In this volume, hastily prepared, under many hindrances, to meet the immediate demands of students, there are doubtless many imperfections, and it is far from being such a work as I would have desired to publish.

Nevertheless, it is a fearless solution of the problem of soul and body which lies at the foundation of all philosophy — a problem which my predecessors generally have shunned as if it were inaccessible to human intelligence — Gall and Swedenborg alone having attempted each a partial solution.

The correctness of my exposition of the triune constitution of man is sustained by the experiments which I have for many years been making in private and before classes, which my pupils have satisfactorily repeated, and it is sustained by universal experience in the history of diseases which demonstrate according to their locality the laws of Sarcognomy. It has also a beautiful and interesting artistic illustration in the varieties of the human form, attitude and gesture, which I hope hereafter to present.

As to the verity of my experiments on the brain and body on which the science of Anthropology rests for its evidence, I refer to my experiments before public audiences in New York and Boston, to the reports of many committees of investigation forty years ago, especially those of the Faculty of Indiana University, the committee of Boston physicians and the New York committee of which Dr. Forry and the poet Bryant were members, and the unanimous testimony of those who have repeated my experiments wherever I have taught, including a number of eminent medical professors, who have been my colleagues. The large and intelligent medical class of the Eclectic Medical Institute of 1849–50 (then the leading medical college at Cincinnati) (Prof. Warriner being chairman) expressed their conclusions as follows: “Many of us at the commencement of this series of lectures were skeptical as to the

PREFACE.

impressibility of the subject in the waking state, but we take pleasure in announcing that the remotest doubt is now dispelled. We have seen the subject deprived of muscular power; we have witnessed a great increase of his strength; we have seen any faculty of the mind brightened or subdued at pleasure; we have personally performed many of the experiments set forth in the "Journal of Man," and can testify, as can many in this city who have witnessed our experiments in private circles, that the half has not yet been published to the world." The frequent repetition of my experiments, not only in this country but in Great Britain, by the late Dr. Spencer T. Hall and many others*, in private and in public, has given as broad a foundation as could be demanded for the verification of such discoveries, even though they constitute a complete revolution in Physiology and Psychology.

This volume is therefore presented, not to introduce the subject by argument and evidence, for the evidence has long been on record, but to introduce its readers to a portion of the vast science of Anthropology, the future guide of human progress.

* I have not thought it necessary to describe in this volume the numerous and marvelous experiments on the brains of adults during the last forty years, but would mention another class still more convincing.

The eminent Dr. Ashburner of London, published among accurate and well-authenticated facts the statement of his friend, A. Lidington: "I have many times excited the different phrenological organs of the brain of this child, and he has answered to each one most correctly; for instance, when I mesmerized the organ of Tune, he has declared to me that he can hear beautiful music, and so with Veneration, he has felt irresistably impelled to pray and speak of God and Heaven. I have more often operated upon little children than adults, purposely to convince the people of the truth of your science, for surely children so young, and many of whom I have never seen before, could not be guilty of any deception."

In my experiments with private classes, nearly every member of the class was usually made a subject of experiments, which was not practicable with larger audiences. The report by Drs. Ingalls, Mattson and others on my Boston lectures in 1843, said: "Most of us witnessed many hundred experiments on at least six impressible subjects — one a gentleman and member of the class, whose intelligence and moral worth cannot be questioned."

CHAPTER I.

INTRODUCTION.

Developement of Cerebral Science by discovery in 1841. Its grand importance and its hostile reception. Failure of all attempts to obtain judicial investigation. Establishment of a liberal college. Attitude of the National Medical Association and similar bodies. Confession of Prof. Gross.

Origin of the present volume in the discovery of Sarcognomy. Its fundamental principles. Its presentation in lectures, and cordial reception. Explanation of Cerebral Physiology and Sarcognomy. Their scientific certainty. Invitation of correspondence. Electric therapeutics of Sarcognomy in second volume. Its extensive scope.

IN 1841 I had the good fortune to consummate six years investigation of the cerebral functions by the discovery that the functions of the human brain, instead of being an inaccessible mystery as they have seemed to the scientific world, were really the most accessible of all the great secrets of nature, and that a method of investigation, the very simplicity of which had caused it to be scornfully overlooked, was competent to reveal the citadel of life, the organ of the soul, the seat of all consciousness, all faculties and passions, the organic embodiment of that Divine principle in which exist all the potentialities of the universe and consequently the basis of all science and wisdom.

Of all subjects that have ever interested the mind of man, this is beyond all comparison the most important, whether we consider its scope and its grandeur as a philosophy, the light which it throws upon all other departments of investigation, or its immediate practical utility in reorganizing, correcting and developing therapeutics, sociology, education, religion, pneumatology and the arts of human expression. Its scope, its power and its grandeur in these respects cannot be adequately conceived until the sciences and the philosophies, that must result from such a discovery, shall have been developed and published, although to a

clear intuitive thinker it may be apparent as it was to David Hume that in mastering Anthropology we conquer all science and philosophy.

Such a discovery in science and philosophy, bringing within our reach a larger realm of truth than all the sciences and philosophies taught in the Universities, was like the discovery of Columbus, which added a new and better world to geographical knowledge and national expansion, the initial incident which marks the humble beginning of a mighty change in human destiny, and if it were not the still existing condition of the human mind to be dominated by the past — if habit and conservative *INERTIA* were not still, as they have ever been, the dominant forces of human existence, the authentic announcement that such a discovery had been made in the honorable and *sincere* cultivation of science would have commanded the attention of the civilized world, not with telegraphic speed, for telegraphs were then unknown, but as rapidly as the mail could have borne the news, and an immediate investigation by all the colleges and learned societies would have settled the question in the public mind and made the year 1841 the most significant epoch in history — the year in which mankind added psychic to physical science, the world of causes to the world of effects, the elements of Divine wisdom to the perceptions of physical knowledge. But there were no collegiate organizations prepared or willing to look to the future, as there were none to welcome the discoveries of Galileo and of Harvey. The great ear of the literary world was still turned backward to catch the lingering echoes of the crude speculations that preceded the dawn of science, for the names of Plato and Aristotle were still revered in the Universities.

It is true the announcement appearing in the *Louisville Journal* was copied throughout the United States, that my experiments on the brain were immediately repeated by Prof. Mitchell, of Jefferson Medical College, and that many repetitions of them in an imperfect manner were made before public audiences in this country and abroad, while I was myself for a few years actively engaged in presenting the subject by lectures and experi-

ments, and challenging investigation by the scientific, but it soon became apparent that HABIT, not reason, governed the world, and that a professor of European Astronomy would not be more uninteresting and unwelcome in China, than a discoverer presenting the key to a new world of science in American Colleges, or scientific magazines, and I abandoned the thankless task of propagandism to confine my teaching to a college in which I addressed my own pupils.

There were of course some honorable recognitions of my demonstrations (see credentials of Anthropology in the Appendix) and the Democratic Review recognizing logically the importance of the discoveries, affirmed that all prior discoveries in physiological science shrunk into insignificance in comparison with these discoveries in the brain; but it was the only magazine, I believe, which had the logical capacity and the manliness to make such a statement, although it would not seem to require any great intellectual capacity to understand that a discovery of the functions of the brain, which reveals the exact capacities of the soul, and the mental and physical powers of the brain, the seat of life, the controller of all physiological functions — the centre of all physiology and psychology, must be of far greater importance than any scientific discoveries heretofore made.

I cannot speak upon such a theme in the language of diffidence and doubt, with reverence for the wisdom which governs the world (and forbids all rapid progress), for the true discoverer who has ascertained any fact, is, as to that fact, an authority superior to the entire world to whom it is unknown. My discoveries of over forty years standing, often verified by others, and never refuted or seriously impeached, challenge attention still, but I present them only as a teacher to those who wish to profit by new science, without seeking to force them upon the attention of those who have no desire to enlarge their knowledge of such subjects.

It is true that in my credulous and inexperienced enthusiasm, I did at first suppose that a science derived from and resting upon experiment, and eagerly courting investigation by the experi-

mental method — a science of unequalled importance and fascination, would speedily interest the educated classes of all nations, but I was speedily undeceived. Of the medical professors in whose halls I had heard the first exposition of medical science, I found but one (and he the most learned and distinguished) who had either the interest in the subject to induce them to investigate, or the intellectual training and knowledge that would have made them fully competent. Under his auspices, I sent an account of my discoveries to what I supposed to be the most competent and appreciative body in Great Britain — the gentlemen who had maintained a phrenological society at Edinburgh, and published the *Phrenological Journal*, and were therefore familiar with novel investigations of the brain ; but my report, though authenticated by one whom they knew as a distinguished scientist, was too marvellous for them, and they simply filed it away (like caveat,) as a document fit to be preserved for future reference, but not fit to be published.

After the failure with the Faculty, the failure at Edinburgh, and an abortive attempt to procure a thorough investigation by the Academy of Arts and Sciences, at Boston, medical journals being closed against such investigations as mine, I thought it useless to seek any further a decision by any authoritative scientific tribunal, and united with other unconquerable liberals in the medical profession to establish a liberal system of medical education and break the unreformable intellectual despotism which had held and still holds the great mass of the medical profession. That effort was successful, and the flourishing condition of the Eclectic party in medicine, which was then organized, gives promise that in time there will be freedom of investigation in medical study, medical practice and medical discovery.

That such discoveries as the new cerebral science which constitutes a complete Anthropology, are entirely inaccessible to the mass of the medical profession was very apparent, and that they would not, under any circumstances, be examined by the National Association which dominates over the profession in America, and therefore that it would be folly to address a memoir to them or invite an experimental investigation of the new science, I was very

courteously, but very distinctly informed, in a letter by the late Prof. Gross, in 1878, who was, if any one, then entitled to be recognized as the head of the profession in this country, and who, appreciating the impossibility under the Code (and the unwritten code,) which governs the Association, advised me to seek some scientific body *outside of the medical profession*, to investigate discoveries which belong to the sphere of medical science (of which Biology is a conspicuous portion), entirely unconscious of the latent satire upon his profession which he expressed.

I was previously well aware of its truth, as a memoir upon Cerebral Embryology which I offered the National Scientific Association at Cincinnati in 1851 was suppressed by the intrigues of medical opponents who desired to crush the movement of medical liberalism represented by our college; and the committee of investigation appointed by the Kentucky State Medical Society at my request in 1877, so entirely neglected their duties that they did not even hold a meeting.

Under these circumstances, the reader will not wonder that this work comes forth as a manual for students, on my own authority, not authenticated by the medical profession, or any collegiate body, excepting the parent school of American Eclecticism in which for ten years my teaching was the recognized philosophy of the Institute.

The present volume however, is not an exposition of Anthropology, but a sketch of the therapeutic application of Sarcognomy, published in advance of its proper place in the exposition of Anthropology, to satisfy the demands of students for a text book to aid in retaining my instructions, and to reach a great number of healing practitioners who need an exposition of the science which makes manual healing a scientific art.

This application of my discoveries arises from the fact that in 1842 my discovery of the cerebral functions was completed by the discovery of the sympathetic relations of the brain and the body, in consequence of which, the functional operations of the brain, which when confined within the cranium are purely psychic, become when transferred to the body by the laws of sympathy,

physiological in their effects, and also by the inevitable manner in which they use the body for their purposes in voluntary acts, produce the same effects which result directly from the laws of sympathy — a wonderful illustration of the ingenuity and Divine wisdom of the plan of the human constitution.

But the reactive effect of the same law renders operations which are purely physiological in the body, such as circulation, digestion or muscular action in their reflex influence on the brain, disturbing or modifying influences of psychic life. That such reflex influence is continually in progress, we readily perceive when we think of the effects on the brain and mind of an excessive dinner, a glass of brandy or a copious inhalation of pure air; and a vast array of mental symptoms accompanying diseases of various organs, which have been observed especially by homœopathic physicians, carries us still further into a recognition of the special influences each portion of the body exerts in its irritated or inflamed conditions, upon the state of the mind.

Thus we have, by rational necessity, a science of cerebral physiology, or physiological influences of the brain, and, on the other hand, a science of corporeal psychology, or influence of the body upon the brain and mind. In all of which we understand that these inverted, or reflex sciences, cerebral physiology and corporeal psychology, are partly sciences of sympathetic association and reflex influence, and partly sciences of functional action, as the vital forces in the brain act directly upon their subordinate apparatus in the body, and the organs of the body in their functional action directly influence the brain, by means of nervous connection and by their influence upon the blood, which as it passes through the body receives and carries along the influence and modification produced by each organ. In addition to which, each organ in the brain or body is compelled for its own efficiency to use its correspondent organ, as Combativeness uses the muscles and heart, and as the vigorous muscular and cardiac action rouses the combative spirit — or as the perceptive organs use the eye, and the eye in its visual action rouses the perceptive faculties.

Thus, we have a science of cerebral and corporeal corres-

pondence and association, which, above, is CEREBRAL PHYSIOLOGY, and below, a compound science of corporeal psychology and physiology combined, which I have called SARCOGNOMY; the primitive effect of any excitement in the body being physiological, and the secondary, psychological.

It is this primitive physiological effect to which this volume will be mostly devoted, for Sarcognomy embraces not only the discovery of the sympathetic psychic effects, but the still more important principle that *each vital function of the body is expressed at the surface*, and that for every function there is an external locality at which it may be reached, and stimulated or tranquillized by nervauric methods, by electricity, or by heat, cold and medical applications.

How very important it is, then, that those who treat human diseases by the application of the hand or by electricity, should know the influence of each portion of the surface, and of the currents passed through the body, from one locality to another, since these vital forces which have been discovered, and which are controlled, by the hand (and the battery) are not merely specific and limited influences for each organ, but are also *general influences for the brain and body* productive of general conditions, as, for example, the influences at the shoulder, which are universally tonic and restorative to mind and body, and the influences of the electric HYGIENIC CURRENT, which animates every function of life, and these give us an entirely new conception of the vital forces of the human constitution.

The principles of sarcognomy were very briefly presented in my system of Anthropology thirty years ago, but I believe this produced few practical results with my readers. When I resumed medical instruction in 1877, I began to teach classes the manual treatment of disease according to the principles of Sarcognomy, giving some hints also as to the collateral use of electricity, and in the College of Therapeutics at Boston I have given a complete exposition of manual treatment. But experience has convinced me of the transitory influence of lectures and the absolute necessity of a manual for habitual guidance of the practitioner

in a matter so entirely foreign to the education and habits of society.

My lectures have been invariably accompanied by practical demonstration of the truth of all that was taught, the majority of the classes have been sufficiently sensitive to feel, recognize and describe the influence of every function described by Sarcognomy, often throwing new light upon the subject by the peculiar manner in which each one was affected.

As a method of healing, Therapeutic Sarcognomy was regularly illustrated upon the members of the classes by treatment of their own infirmities, pains or diseases, as a demonstration of the value of the methods and a part of the instruction. There was no more hesitation or doubt than in the collegiate lectures which present and illustrate the experimental science of chemistry, nor will there be any difficulty or hesitation among those who read this volume and entering into the spirit of the subject, engage in the experimental demonstrations which would make them practically familiar with the subject in the manner that I have recommended. But I presume the result may be different with those who approach the subject in a spirit of antagonistic skepticism, and without proper experimental inquiry, attempt to form opinions by *a priori* speculations upon the basis of their knowledge of other subjects and their ignorance of this. Perchance there may be reviewers too, who would rather assail than investigate, and who do not feel that practical ignorance of any subject is any disqualification for instructing the public. This volume was not written for that class, but for sincere seekers of scientific truth who have sufficient sincerity and rationality to recognize the same qualities in the author, and to believe that a system of science which has been cordially accepted by all who have become well acquainted with it, is worthy of patient study.

I might have introduced a long array of the unanimous testimony of those who have felt the truth of Sarcognomy in their own persons, and of those who have been healed upon its principles; but such is not the custom of scientific teachers. We state the

truths that exist in nature, we state what we have found, and we show others how to find the same.

That which I have taught as to the constitution of man, which I have illustrated in thousands of experiments upon others, is also to me a matter of personal knowledge. I feel the influence of many localized functions described in Sarcognomy, and I can speak of them with confidence, as I could say that I see with my eyes or hear with my ears, and hence I do not feel like arguing upon such subjects or adducing any testimony as to truths which are so familiar.

Yet, although I do not consider such testimonials necessary in this volume, I am not indifferent to the expressions of those who honorably and sincerely study the laws of nature in the same spirit as myself, and who by their observations may throw additional light upon the laws and phenomena which I have so briefly stated. I would therefore earnestly invite the correspondence of those who undertake to investigate and practice in the new department to which I have called attention, and to cultivate a science which time has not permitted me to elaborate to the perfection in which it may be enjoyed by posterity.

I shall respond with equal pleasure whether my correspondent shall enumerate his triumphs, or state his difficulties, — whether he desires additional information, or contributes facts and discoveries made by himself in the boundless field of Sarcognomy and Therapeutics.

The period of life at which I have arrived does not permit me to anticipate witnessing the future triumphs of Sarcognomy and its revolutionary influence on medical science, or the new aspects its Therapeutics may assume under scientific cultivation, and I am, therefore, more desirous of communicating with those who become my co-laborers in this science, of which this volume is a partial exposition only. In the second volume I propose to show the existing status of Electric Therapeutics, and the fundamental changes in practice and principles which are made by Sarcognomy, as well as the new apparatus by which I hope to enlarge

the scope of its practice, and render it more worthy of general use by medical practitioners and manual healers, as well as an important element in popular hygiene and education.

29 FORT AVENUE, BOSTON,

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POSTSCRIPT :— THE SCOPE OF SARCOGNOMIC THERAPEUTICS. It is well, before offering the specific therapeutics of this volume, to glance at the entire scope of the Therapeutics to be developed by Sarcognomy. If the healing art is based upon the true science of life, and if (as will be shown) life is an enduring spiritual power, or being, of wonderfully complex constitution and capacities, which organizes the human form into a complete expression of itself, and of every faculty of its complex existence (designed to act on matter here and in a spiritual world hereafter) — each faculty having a double purpose, spiritual and material, the body — a specific structure for manifestation in the brain and in the Sarcog- and if these vital powers (their localities being shown by nomy) can be reached, stimulated, strengthened and modified by other means than drugs, with a precision never before known, may not this new therapeutics largely supersede the drugging method? Might it not supersede the drug method entirely, if our natural agencies are sufficiently powerful to act upon all? To what extent this can be done must be shown by the students of Sarcognomy.

To a very large class, at present, the vital nerve, but to a proved sufficiently potent to make medicines unnecessary, and still larger class, in the temperate zones, it is not sufficient. For that cannot be substituted for medicine to any great extent. Of a larger class, however, we have the irresistible agencies of electricity and caloric, the application of which needs only the guidance of Sarcognomy, to which this volume is devoted. With such agencies at command, enthusiasts may exclaim " Throw physic and e-dogs ;" but medical remedies are too potent, too convenient, and economical to be discarded by those who understand their value. Nor can they be very extensively discarded to introduce the use of electricity, until its application shall have been perfected by, it shall have been made more genial, safe and curative.

In this volume, the nervauric method, which uses the human hand, will be fully presented, with the anatomical and physiological bases of Sarcognomy, and with incidental instruction in the use of electricity. The second volume, which I have been preparing for the exposition of Electro-Therapeutics, will be delayed until I can accompany its exposition and illustration with apparatus better adapted to the new method than any now in use.

CHAPTER II.

OF LIFE AS A SPIRITUAL POWER, AND ITS LOCATION IN THE BRAIN.

Ancient medical philosophy, spiritual or vital. Des Cartes the apostle of modern skepticism. His visionary dogmatism. Prof. Huxley a follower. The Cartesian spirit in medicine. Its intolerant rejection of facts and fair investigation. Criticism by Dr. Lionel Beale. Living beings have powers foreign to dead matter. Medical dogmatism develops ignorance. Its repudiation by Dr. Reynolds. The unproved hypotheses of scientists. Interesting physiological statements of Prof. Bennett. Vital phenomena of amœbæ and white globules. Prof. Ranzier's statements. Phenomena of granules, bacteria and vibrios. Hæckel's primeval parent of life a fiction based on imagination. The example of the amœbæ refutes materialism. Bastian's evasion of the issue. No anatomical difference to explain different vital endowments in nerves. Vitality an indestructible and permanent existence. Total failure of the fashionable physiology to explain muscular motion. Fallacious ideas of the action of the brain, and its influence on health. Fallacies in education. The fundamental error which makes biology a physical science. Public denial of vitality. The alternative doctrines, life or mechanism. The source of life. All life comes from influx. The blood a channel of influx of vital conditions. Nervous influx necessary to sensation, motion and circulation. Life comes and goes through the nervous system. Death occurs from below upward. Observations of Bernard and Bezold. Life a neurological influx, controlled by the brain. Paramount importance of cultivating the brain. Report of M. Gasparin on Belgian miners. Cerebral stimulants a substitute for food. Effect of heroic excitement. Something more necessary than the chemical elements of food.

Effect of interrupting the transmission of influence from the brain. Effect of injuries to the spinal cord. Fatality of severe laceration. Pathological effects of spinal injuries. Effects on the heart. Analogy to typhoid fever. Effects of injury of the nerves. Fallacies of Claude Bernard. Wasting of the muscles from lack of nervous influence. The ganglionic system dependent on connection with the cerebro-spinal. Centralization of life. Brain controls both voluntary and involuntary processes. Tenacity of the old ideas on this subject. Rapid decay of the body after injury to the brain. Brain the chief seat of life, as the heart is of circulation. Intellectual incapacity formerly to understand the heart, and now to understand the brain. Persistent avoidance of the investigation, and rejection of proper methods. Disregard of Gall and neglect of my demonstrations, and the experiments of Prof. Mitchell. Unfortunate results. Vague and confused notions prevalent. The Divine origin of life, and its modes of influx. Benefits from its culture. Cerebral energy the source of health and object of therapeutics.

THE medical philosophy of to-day is low in the trough between the great waves of thought which once touched the higher realms of being, and will again, in its reaction from a downward career.

The old medical philosophy which exclusively ruled the world until the 17th century, recognized the spirit or pneuma as the basis or essence of vitality. Van Helmont, Stahl, Harvey, Hunter,

(Note —Van Helmont located the soul in the epigastric region because he supposed the brain had no circulation of blood.)

Cuvier and Bichat were vitalists, recognizing the vital force as distinct from and superior to the chemical forces which were subordinate and antagonistic to vitality.

Des Cartes (1596—1650) the Apostle of Skepticism, led the way in that style of dogmatic denial, inspired by the combative animal nature, which has done so much for the limitation of human knowledge and the diffusion of falsehood; for dogmatism is not content with simply ignoring principles or truths that are great and wonderful, but prompts to the arrogant presentation of *a priori* hypotheses, often of the most absurd nature, to sustain its own contracted views which originate in the rejection of evidence and neglect of observation. His astronomical system of vortices was but a crude speculation, which was set aside by the scientific researches of Newton. Equally visionary were his conceptions of the human constitution as a physical body, operating wholly by physical laws, but giving lodgement to a soul in the pineal gland, which was simply a spectator, having no action upon the body and receiving no influence from it. A baseless notion more fully developed afterward by Liebnitz. The speculative dogmatism of Des Cartes has commended him to the admiration of the famous modern skeptic, Prof. Huxley, who has revamped the other insane notion of Des Cartes, that animals are mere machines, operating without consciousness or thought, as a clock or any other physical apparatus — a very logical inference from materialism.

The Cartesian spirit of dogmatism limiting the mind to the conception of physical facts, has taken possession of the medical profession, and Dr. Lionel Beale well says:

“The disciples of the new philosophy insist that there is but

one force or power in nature, that the sun is the source of that force, and forms livers, hearts, lungs and brains; and that every living thing is formed by him — that in the language of Bence Jones — ‘The one law of the union of force and matter, and of the conservation of energy, obtains throughout the organic as well as the inorganic creation.’ I feel quite sure that if the physicists who make these confident assertions could condescend to study the phenomena of very simple living things, they could very soon discover that they had no case at all. Physico-chemical dogmatizing of this kind has been going on for twenty years. It has done nothing towards unravelling the mysteries of life which meet an honest student of nature at every turn, and it has led a number of idle people to believe that we really know a great deal more than we do know.”

The “simple living things” which confound materialism are seen in every living structure. Such structures are built up by a structureless, transparent jelly, called protoplasm, or more properly bioplasm, which is the seat of life, and is self-moving with motions for which no scientist has ever discovered any other cause than vitality — with a power of assimilating and vitalizing dead matter, and a power of organizing structures for the formation of which no reason can be given except that their formation is the result of the vitality which maintains the mysterious motions of the bioplasm.

Medical dogmatism is not philosophic — it is not a faithful seeker of facts, but rejects or stubbornly evades those which might give deeper philosophic views, and seems to hold that any fact contradicting materialistic theories may be ignored entirely, or may be discarded on any frivolous pretext, and that any author who records such facts should be suppressed or ignored. Hence a large amount of most valuable scientific literature is entirely *unknown* to the pupils of the colleges, and this ignorance is firmly maintained; for the physician is ostracised or scoffed at, and the professor ejected from every honorable position who treats all facts with fairness, and makes no secret of his convictions. Yet all are not governed by this absolute materialism. Dr. Reynolds in the

address on medicine delivered in 1874 before the British Medical Association said "Physical force may be compared to vital acts, but life itself is the special property or the condition of the special material which effects that peculiar relation, and it is as far from comprehension now as a thousand years ago. " To the suggestion that by further experimentation we may get rid of the term and the idea of life itself, and so make a great advance in science, he says "I believe it will not be done but that there will ever remain the same kind of mystery with regard to life itself * * that still shrouds the nature of the simpler forces, such for instance as gravitation or heat." "The view that is taken of the correlation of vital and physical forces, when it assumes the form that I have mentioned, is, I think mischievous in therapeutics." He refers especially to the abuse of electricity, which "has again and again been used when it could by no possibility have been productive of the slightest advantage, and when the production of such enforced action of muscle and nerve has but diminished the strength and exhausted both the energies and the endurance of those who had not one grain of either of those qualities to spare." What was needed, he says, was the "conservation of the central nutrition, and a consequent addition to the stock of vital force," not "Faradization, alcohol or strychnia."

Alas, if the whole tale could be told of the destruction of health and life by false and narrow medical theories, it would rival the horrors of war.

The fact that chemical manipulation cannot produce the most highly organized substances and structures, which are developed in human bodies, does not embarrass the anti-vital colleges, for they can hold on to their *unproved hypothesis* a thousand years, and if at the end of that time they shall have produced the greater portion of those substances by chemical methods, they will be still as far off as ever, for they will be unable to make any of their substances act as living bodies do, and it will still be as apparent as ever that life comes only from life, and never from mere organization. But it will not require a thousand years to improve the brain development sufficiently to enable men to investigate in a

candid spirit, and give due weight to facts a thousand times demonstrated. Prof. John Hughes Bennett gives the following interesting illustrations of vitality. "Other movements which are unquestionably vital, occur in the molecules of the yolk, on the entrance into the ovum of the spermatozoid. Here it *cannot be maintained* that the results are purely physical, because in different ova we see such widely varying effects from apparently the same cause. Neither can it be attributed to any direct influence of the cell, or of its nucleus — the germinal vesicle. For example, an egg is fully matured in the female organs of generation, and would prove abortive if a spermatozoid did not find its way through the zona-pellucida, and get amongst the molecules of the yolk. As soon as it does so, the apparently purposeless Brunoian movements receive a new impulse and direction. Both spermatozoid and germinal vesicle are dissolved among them, and wonderful phenomenon of the division of the yolk takes place, not by cleavage or other action of the cell wall or nucleus, but by the separation of the mass into two masses, instead of one. The nature of the phenomenon in this case may be compared to what is observable in a dense crowd of men called upon to pass over to the right or left hand in order to settle any disputed question by a majority. At first unusual confusion is communicated to the whole — some hurry in one direction, others in another; but after a time is seen at the margins, where the crowd is least dense, a clear space, which gradually approaches the centre, and at length bisecting the whole, produces a complete segregation of the crowd into two portions. So with the molecules of the yolk in the egg after impregnation. Their movements are directed by conditions which did not previously exist, and a stimulus is imparted to them which causes the peculiar result. It is the division and subdivision of the yolk, wholly or in part, which produces the germinal mass out of which the embryo is formed, and this not by any direct influence of the cell or nucleus, but in consequence of a power inherent in the molecules themselves, which was communicated to them for a specific purpose."

There are numerous phenomena in every animal body, which

are entirely distinct from the operation of physical forces, and which to a clear intuitive mind are an instantaneous demonstration of a controlling power utterly different from mechanical and chemical energies. The incessant locomotion and change of form occurring in amoebae and in the white globules of the blood cannot be explained mechanically. These white globules (which in man vary from one-fiftieth to one-fivehundredth of the red, in number, show continual changes on their surface, putting out or withdrawing a small portion of their exterior, like living amoebae, until after a few hours this vital property disappears and they remain spherical and at rest.

(Note—"In studying the amoebae, white globules of the blood and the lymphatic cells (organic equivalents of the nervous system) we have stated that their movements styled amoeboid are not produced by accident or at random. The prolonging of their substance in their movements shows itself at the points where the cellules are subjected to some irritation. The cell is then sensible, and its sensibility excited acts on its mass which responds by a movement. The amoeboid cell is then an element at once nervous and muscular, but its sensibility and mobility are not localized — they do not depend upon any organic differentiation according to the precise expression of naturalists. This differentiation *begins* among beings a little more complex — such, for example, as the polypi." — (*Prof. Ranzier's Lectures, in the College of France.*)

Equally unaccountable are the movements continually in progress, of the granules in the interior of the white corpuscles, which continue after the white corpuscle has been dissolved and its contents have escaped. Nor is there any physical explanation of the movements of bacteria and vibrios which originate when animal matter is undergoing decomposition in fluids. Still more mysterious are the strange movements of conception when the male and female elements unite in forming the embryo. The materialist looks at this, and instead of drawing the most obvious and natural inference, substitutes the *hypothesis* that in some future age we shall discover the physical causes which he *supposes* to be the agents, without any scientific basis for his opinion.

The origination of bacteria and vibrios in fluids from matter once vitalized as vegetable or animal substance (independent of the atmospheric germs for which M. Pasteur contends so firmly) gives no substantial aid to the hypothesis of the materialist. It simply proves that life is capable of entering into very close union

with suitable albuminous substances, so close as to remain in combination after the substance is separated from the body in which it was produced, in which it worked in combination with the general vitality. There is no vital chemistry to explain this combination of organized matter with vitality except that which I have derived from Psychometry. That the globules of blood and of milk, separated from the body to which they belong, originate new forms of life as bacteria, vibriones or the mildew on milk, is well known; and it has also been observed that the general vitality does not always control these subordinate growths, as some species of bacteria have been observed in the fluids of various plants, such as the Apocynum Cannabinum (Indian hemp) Asclepias Cornuti (milk-weed) and Sambucus Canadensis (elder) which are supposed to be transformed starch globules. Bacteria and fungi have been found in the interior of the brain, of the liver, in hepatic cells, epithelium cells, membranes and other parts of dead animal bodies or parts of living bodies undergoing decay. They have also been found in eggs. Their occurrence in the living body circulating in the blood (as I have found in certain patients) is simply an evidence of the failure of the general vitality to control subordinate parts, allowing abnormal action to take place, as occurs in fever, inflammation and gangrene, when vitality is injured and unable to control the fluids of the body which continually tend by their chemical properties toward decomposition, in which new forms arise; for which reason antiseptics give great assistance to vitality in fevers, in controlling the fatal septic tendency of animal compounds. The bisulphites of lime and soda, by their great anti-septic power counteract the degenerations of fever and the tendency to evolution of bacteria.

To deny the existence of life power as something distinct from matter, is to assume that matter may come together and originate life by its accidental grouping — but this has been sought in vain, and Hæckel has been driven to rely upon the Monera or Amœba, in which the marvellous properties of life are manifested by an apparently homogeneous speck of gelatinous matter, as the "*primeval parent of life on the earth.*" This example he con-

siders of "the very greatest importance to the hypothesis of spontaneous generation;" but his example proves nothing, except that he can, as he says, "easily *imagine* their origin by spontaneous generation;" and he must also *imagine* a miraculous transformation of the lower into the higher order of animal life, proceeding through countless ages without leaving any record — so that his theory at last is but an affair of imagination, like the vortices of Des Cartes. If this "semifluid formless and simple lump of albumen," as he describes it, is "the primeval parent of all other organisms," why does not a formless and simple drop of albumen from an egg or from the coagulable lymph of the blood manifest the same active life and again act as "the primeval parent of all other organisms?"

The example of the Monera, instead of helping the materialist, is really one of the best evidences of the futility of their hypothesis, as it shows that vitality is competent to display its powers in an organization of the simplest character, while a structure apparently the same, without the vitality, simply goes into decomposition. The vital power displayed by the amœba are not explicable by any complexity of organization. "The amœba," says Bastian, "is forever changing its form. It is composed of a clear jelly-like, material, endowed with a super-abundance of that intrinsic activity characteristic of animal life generally. Those internal molecular movements, indeed, which are inferred to occur to a marked extent in all living matter, seem to take place in it in a preeminent degree. Its whole substance shows a mobility of the most striking kind. It continually moves through the water or over surfaces, by alternate projections and retractions of its active body-substance." Thus, without visible muscles it moves, and without a digestive apparatus it takes and digests food, taking it at any point of its surface. The vital powers are as Bastian says, "uniformly possessed by all parts of the organism," "composed almost wholly of undifferentiated protoplasm." And from this "undifferentiated protoplasm" or "jelly like material" the vital energy builds up the muscular and other organs. The formation of muscular and nervous tissue by *vital processes* acting on the

jelly like substance, is the conclusion adopted by Bastian, and what other conclusion could be adopted in view of the facts of embryology, than that life constructs its organs in the first place, as it modifies them continually, so long as it holds them. But Bastian as a materialist is compelled to express himself vaguely ; instead of a *vital force* modifying and carrying on developement, he regards the *processes* as the cause of the developement — thus assuming that all the powers of life are inherent in the jelly-like substance — but if this were so (nature operating by unvarying laws) we might expect that all such jelly-like substances would show the same inherent powers of life, and if they did it would give great plausibility to the position of the materialist. In meeting the issue Bastian unconsciously resorts to a subterfuge. To say that "vital processes" are the *cause* of anything is as lucid as to say that locomotion is the *cause* of our travelling. *Vital processes* are not a substance or a power, but merely a name for the action of vitality. If we deny the vitality, then the processes are merely chemical and mechanical, and the use of the word vital is inappropriate.

¹Organization is not the cause, but the effect of vitality. The most learned anatomists can discover no organization that explains the movements of amœbæ, and they seek in vain for any perceptible difference in peripheral nerve filaments between those which have sensitive and those which have motive power. Vitality or vital power is continually going beyond organization, seizing and appropriating dead matter, and endowing it with vital properties by union with an existing organism ; and when sufficiently concentrated and free from material incumbrance, it is competent to take hold of a large mass of dead matter, producing wonderful changes and transmutations, or moving large bodies weighing more than the human form with irresistible force, so long as it holds them. These facts, older than any facts of modern scientific discovery, and as extensively demonstrated before intelligent and critical observers, are unknown only to those who do not desire or seek to know them. If eminent scientists close their eyes and turn away their heads when their dogmas are demolished, they

may nevertheless live long enough to blush for their willful ignorance. I do not choose to follow their shameful example in ignoring the most wonderful scientific facts established in the nineteenth century.

There is no evasion of the issue. Either chemical and mechanical forces do all that is done, or a higher and subtler power called vitality does what is essential. If that higher power exists it is, like other primitive forces, *indestructible*, and must be capable of existing in other forms and places when it leaves any embodiment. Like caloric, it passes from one place to another without loss — but, unlike caloric, it has an organized coherence which prevents its dissipation or reduction. The honest and enlightened scientist who is not cramped by bigotry or dogmatism is bound to seek the existence of this force after it departs from the human body, if it can be anywhere detected, and when millions, uncramped by prejudice, have followed and recognized it in spiritual forms, in more perfect exhibition than it makes in the human body — when, moreover, the research has been most severely critical and exact, conducted often by those whose names are eminent in science, to refuse to investigate or even look at the results of investigation is the same exhibition of fatuous bigotry which was arrayed against Galileo.

The fashionable Physiology in its attempted explanation of muscular motion independent of life, is compelled to rely upon a mere hypothesis. It pretends to account for muscular power as a result of the combustion of elements of the muscle or of the blood, which furnish carbon and hydrogen.

(Note—According to Hermann, who has specially studied the chemistry of the developement of heat during muscular contraction, muscular work is the result of the decomposition of nitrogenous substances. — Dr. Beard.)

But combustion does not generate contractile power ; on the contrary it generates caloric, which is an expansive power, and which so far from favoring muscularity, is a relaxing, debilitating influence ; and the greatly increased combustion of fever is accompanied by the almost entire destruction of muscular strength. To assume that an expansive force like caloric is under such circumstances converted into a contractile force, when there is no example in the human

body or in any department of nature of such a transformation, is a most unscientific and unwarrantable exercise of a credulous imagination. Caloric in the steam engine manifests force, but it is expansive force alone, it never shows contractile power. (Combustion occurring in a muscle, is the same chemical fact as when it occurs elsewhere, and must produce the same effect — but the more rapid the combustion the greater the heat, the more the muscle is relaxed.) The muscle is much more contractile when cold, and its maximum persistence of contraction is in the coldness of death — the *rigor mortis*. Contractility belongs to cold and magnetism, but the attractive power of the magnet is destroyed by heat. Contractility is a property of muscular substance given to it by the forces of vitality in its organization, and controlled by vitality in its operation, but it is still an unsolved mystery in physiology — certainly it is not the effect of combustion, nor is it any less conspicuous in the cold muscles of the fish, in which there is so little of oxidation.

It is very remarkable that this *obvious sciolism* should have been so unanimously adopted with unquestioning faith by modern biologists, when it is but a metaphysical inference from their *a priori* dogma of matter and force, as the cause of all things, though a moment's candid reflection might have suggested that when one form of force is converted into another, it entirely disappears by the transformation, and exists only in the new form. The work that is done in a steam engine is commensurate with the consumption and disappearance of caloric, but there is no evidence that caloric is ever in the slightest degree consumed or diminished by muscular contraction ; on the contrary, there is commonly an elevation of temperature about two degrees by vigorous muscular contraction. All the caloric generated in the human body by the consumption of oxygen — all the oxygen is capable of producing — exists in the body as caloric, until it is lost by radiation, conduction and evaporation. The ingenuity of chemists has been severely taxed to discover the chemical processes in the human body which are adequate to account for the amount of caloric that we know is generated and discharged ; and it is not entirely certain that they

have discovered a complete explanation. Hence there is no possible opportunity for discovering chemical or combustion processes to manufacture something convertible into contractile force when all that can be discovered is known to be devoted to the production of sensible caloric, which is discharged without doing any work in the body, precisely as it is from the fire that warms our apartments, having performed its sole office of maintaining the warmth which is a necessary condition for the control of matter by spirit and for all physiological processes.

As according to the fashionable physiology, vitality is a result of chemical process in the body to which the convoluted brain contributes nothing, and from which it expends a great deal. We have been warned against the effects of cerebral excitement, of mental cultivation and of precocity, as though the action of the brain were both exhausting and dangerous.

All of these theories were erroneous, and based upon inaccurate or incomplete knowledge. Education and mental excitement are injurious only when they exercise, excite or fatigue the anterior, intellectual and sensitive portions of the brain, instead of giving normal exercise to the whole brain, which is in the highest degree invigorating, and far more beneficial than muscular exercise.

Among medical authors, ignorance of the brain has been too profound to discriminate between or understand its functions, and to know that the frontal region alone is exhaustive to the vital forces, while the occipital half is the very seat and source of vital power.

Not understanding this, the world has adopted an educational system which attempts to exercise the frontal brain alone, which exhausts the physical and moral energies, undermines the health, injures the eyes and shortens life. Then, attributing these evils to education and cerebral activity, it regards the latter as unfriendly to health, and unsuitable for woman, when, in reality, a normal or complete education is an evolution of health and vigor, and the cerebral activity which embraces the emotions and ener-

gies, is a grand renovator of health, and invigorator of the constitution.

Influenced at first by the old theories universally taught in the colleges, it was difficult for me to understand the true relations of the brain to vitality, until by many experiments and prolonged study it became apparent that vitality was not the product of organization, but organization was the product of vitality, which is the organizing and sustaining power, the dominant power in our complex constitution. This vitality has ever eluded and baffled the medical profession because they have regarded Biology as one of *the physical sciences*, and thus reversing the plan of nature, have regarded combinations of matter as the source of life (although they have been unable to produce life by any chemical combination), and hence have fixed their attention on matter alone, ignoring life — treating it as a phenomenon or a fact — of no substantial existence or power, and entirely refusing to follow or witness the evidence of its continued existence after its separation from matter, because such evidence annihilates dogmatic theories.

That this gross materialism has usurped the control of Biological science, is sufficiently evident when we find that a President of the American Association for the advancement of Science could give a public lecture in New York, denying vitality as a power, and assuming its origin from mechanical and chemical causes, without a word of protest from scientists, clergy and literati. Such scientists expect by thermometric observation to find the calorific and mechanical equivalents of thought and emotion as Joule determined the mechanical equivalent of caloric! They are altogether too serious and positive to see anything ludicrous in such speculations.

We are compelled to choose between this gross scientific materialism, which annihilates Pneumatology and Religion, — and the true science of life, which recognizes its potentiality in the living body, and accepting the irrefutable and superabundant evidence of its continued existence after separation, enters with pleasure upon the profound and sublime study of PNEUMATOLOGY, in which science enters the sphere of wisdom and love.

If life is a reality, a power, a cause, and not a mere phenom-

enon or effect, the question arises, where is it located, whence it comes and how it is fed or sustained. These questions must be answered before we can determine the relation of vitality to the brain.

If life is a distinct element of permanent existence — as permanent and as distinct as the oxygen which constitutes the major part of the human body — it must be like other elements derived from some abundant supply of the same element, and if it increases, it must increase by influx from its source, as do the ponderable elements which are supplied by influx of food.

The ponderable elements do not supply life, but only an apparatus for its use. When their supply ceases, the physical apparatus of life is lacking, and we die of inanition — i. e. life leaves a structure which is incompetent to hold it, or, rather, to which it cannot hold.

As bodily structure comes from material influx, it is equally true that *all life is from influx*. There is no such thing as life inherent in structure, **ALL LIFE BEING INFLUX**, and this becomes, evident by a brief and simple course of reasoning.

The life of any limb, or other part of the body, depends immediately upon the influx of blood, and its death follows the entire loss or removal of the blood. The increased development of vitality which comes from an increased supply of blood is seen when the circulation of the face is increased by section of the cervical ganglionic nerves. In these cases the evolution of heat is greater, the sensibility longer resists the influence of chloroform, the rigor mortis is later in its appearance, and putrefaction does not begin so soon. But the blood has no more inherent vitality than the limb. If it stagnated in the limb — the limb and the blood would die together. It obtains the conditions of vitality in the lungs, and dies when deprived of those conditions. But is not the structure of the lungs that imparts the conditions — it is the air that enters the lungs, without which influx lungs, blood and organs all die. Thus there appears to be an influx through the head by the trachea, of a vitalizing element, which we call oxygen, which is a magazine of the conditions necessary to

vitality, but not of vitality itself — Food supplies the physical elements, and the continued influx of both is essential to life, but does not make life. The limb that is supplied by alimentation and respiration with good blood is not thereby kept alive, but only in a viable condition!

An influx from the nervous system is necessary to give the vital capacity for sensation and motion, and influx through the nervous system is necessary to give motion to the heart and the proper conditions to the blood vessels for circulating the blood. Hence without the nervous system there can be neither conscious active life, nor the circulation of blood which gives the conditions of vitality, and the consumption of food which supplies material.

As life is manifested by sensation, motion, circulation (and consequent nourishment) and as all three are dependent on influx from the nervous system, it is obvious that life really comes into all parts from its seat in the nervous system. And although the digestive organs supply material and the lungs supply by means of oxygen the imponderables, these are but subordinate contributions incapable of evolving life, which comes entirely by the nervous system, and takes its departure therefrom when it leaves the body, first abandoning its outposts in the lower limbs, concentrating to the upper end of the spinal cord, lingering in the chest — then in the base of the brain and finally leaving from the upper portions of the brain, in accordance with pathognomonic laws — and as has been observed by clairvoyants. After death, the muscles of the limbs as shown by Onimus, lose their contractility much sooner than the muscles of the trunk, and the extensors before the flexors. A similar order of succession is observed in general palsies.

That death occurs from below upwards was illustrated by the celebrated physiologist Claude Bernard in experiments on the nerves and muscles of frogs. When the animal dies from loss of blood or from woorara poisoning, the filaments of nerves nearest the muscle first lose their vitality, the nerves die from the periphery to the centre, and the muscles that have ceased to obey their nerves may be roused by induction currents applied nearer the spine or upon

the spinal cord at the roots of the nerves. The death of the nerves as shown by Von Bezold, begins in the filaments which are distributed in the muscles, which gradually lose their power, and progresses through the trunk of the nerve to the spinal cord.

If then life emanates from the nervous system which actuates the muscles, the lungs, the digestive organs and the circulation, and which also controls nutrition — it is evidently a neurological influx, which through the nervous system controls the material influx in voluntary and unconscious processes, and its seat or channel must be sought in the controlling portions of the nervous system which we know are in the cranium.

In discovering this truth we are led to important practical conclusions, for hygiene and for virtue. We learn that it is far more important to cultivate and energize the brain and the soul, than to confine our attention to purely physical matters. We learn that with proper spiritual energy man's life may be efficient and successful, but without that higher energy, an abundant nourishment may develop only a gross and degraded humanity.

The influence of a regimen which stimulates the brain was shown by the report of M. Gasparin to the French Academy upon the diet of the working population. He ascertained the usual amount of nitrogenous food in the diet of the laboring population of France, and ascertained that Belgian miners performed the most vigorous labor, beyond the average of French miners, with much less of food — less even than the inmates of workhouses and the monks of La Trappe. “The mining population of the environs of Charleroi (says M. Gasparin) have resolved this problem to nourish themselves completely, preserve health and great vigor of muscular strength upon a diet with less than half of the nutritive principles of that indicated by observation in Europe.”

The distinctive peculiarity of the diet of the Belgian miners is the use of a potent cerebral stimulant. They use three times a day half a pint or more of coffee, using no other beverage, coffee, bread and butter being the major part of their diet. This gives a stimulus to vitality which resists the rapid disintegration of the tissues and by diminishing the amount of excretion diminishes the

necessity for food in proportion. In the same way the demand for food diminishes in those who live under high heroic excitement, like Kossuth, who in the Hungarian war was accustomed to take but one meal a day. "We know," says M. Gasparin "how sober people are who drink coffee. The prodigious abstinence of the caravans, the slightly nutritive regimen of the Arabs, come with all the authority of experience in support of the effects attributed to this beverage; and the distribution of coffee to the French troops during their fatiguing marches through Algeria is regarded by the officers as one of the best means of enabling the troops to support them."

There is much truth in the conclusions of M. Gasparin, but he overlooks the fact that human constitutions are not all alike — and that some are naturally able to live on a smaller quantity of food than others from having greater tenacity of constitution and greater power of appropriation of nourishment.

Food must give us something else, in addition to the chemical constituents of the body — something that sustains our spiritual energy, without which health declines. The fibrin of the blood is chemically speaking a complete embodiment of nutriment, but dogs fed upon it will starv^e in about a month, according to Majendie, for it is lacking in something not yet understood.

It is easy to verify the transmission of life from the brain to each and every organ of the body by interrupting the channels of its transmission, and finding that life is impaired or destroyed in proportion to the interruption, as a stream is diminished when its fountain is obstructed, and disappears when it is closed.

The spinal cord through which the brain power is transmitted, is so strongly protected by the bones of the spinal column that it is only in severe injuries that we discover its importance. In the nervauric experiments which I have introduced, we are exempted from the necessity of studying the records of surgery or engaging in the tedious cruelties of vivisection, as the human hand can evolve any local function regardless of the hindrance offered by bones and integuments.

Injuries of the spinal cord operate with terrible effect upon

all parts which lose their connection with the brain by the injury, or have their connection impaired.

Brodie says, that "wounds which penetrate through the external parts into the spinal cord are almost invariably fatal at a very early period, the examples of recovery from them being very few in number." "The effect of a violent concussion is at once to impair, and even to destroy the functions of the spinal cord, sometimes even causing the patient's death in the course of a few hours."

It is well known that when the cord is divided or severely injured by compression, all sensation and voluntary motion are lost below the point of injury. The inferior parts are beyond our consciousness and beyond our control as if they belonged to another individual. Surely such facts should have fixed in the minds of Biologists the truth that life belongs to the brain and to other parts in proportion as it is borrowed from the cerebro-spinal system, of which the brain is the commanding center.

Injuries of the spinal cord seldom amount to an absolute isolation of the parts below the injury, as the physical connection exists notwithstanding the laceration or compression. But if the injury be sufficiently severe and sufficiently high on the cord, then death is speedy. The quickest way to kill an animal (except crushing the brain) is to sever the cord just below the cranium. "A case of sudden death from dislocation of the second vertebra as recorded by Petit, and other similar cases are described by Sir Charles Bell and Mr. Stafford. The latter author mentions two cases of death taking place immediately from fracture of the second and third cervical vertebra. "I attended a young gentleman who labored under symptoms of caries of the superior cervical vertebra, and, who, having eaten a hearty dinner, suddenly expired while altering his position in bed." (*Brodie.*) Evidently, as all life in the body proceeds from the brain, the severance of the spinal cord immediately below the cranium, or its severe compression must be immediately fatal, and all surgical records confirm this statement.

A remarkable illustration of this, is mentioned by Sir Charles Bell, in his Anatomy. — "A young man was brought into the

Middlesex Hospital, who had fallen upon his head. He soon recovered, and lay prostrate for some time without exhibiting a symptom to raise alarm. He had given thanks to the assembled governors of the hospital, and had returned into the ward for his bundle, when, on turning around to bid adieu to the other patients, he fell and in the instant expired. Upon examining his head, it was found that the *margins of the occipital hole had been broken*: no doubt it had happened that in turning his head, the pieces were displaced, and closed and crushed the medulla oblongata as it passes from the skull."

But as spinal injuries commonly amount only to a slight laceration or a slight compression, life though greatly impaired may in some cases continue until the injury has been repaired.

In these cases, however, organic life is gradually impaired to a great extent — an extent proportional to the injury. Thus the bladder becomes paralyzed and incapable, expelling its contents. The secretion of urine is either entirely suspended or becomes quite morbid, having a disgusting odor, an unnatural color and amorphous sediment. It is most commonly ammoniacal (corresponding to its decay when outside of the body), turbid and full of unnatural mucus, derived from the bladder, and frequently containing blood. In other cases the quality of the urine changes from day to day. The bladder, by impairment of its vitality, is in a congested condition with adhesive mucus and phosphate of lime in its interior.

The bowels become torpid and require the most powerful purgatives to move them, the abdomen becomes tympanitic. Evacuations sometimes take place unconsciously and involuntarily. Vomiting occurs in other cases, ejecting large quantities of dark colored fluid. The alvine evacuations are sometimes of a black tarry character and highly offensive odor.

The external parts show an equal loss of vitality, and sloughs are formed, and gangrene developed from the mere pressure of lying on the bed. Sloughs often appear on the sacrum, nates and ankles as early as the second day. The sloughing is more severe when the injury is higher up, and consequently vitality more com-

pletely excluded, and all the surgeon can do is to endeavor to diffuse and moderate the pressure.

Notwithstanding the severe consequences to the body, the brain is not usually affected unless the injury be above the cephalic and pulmonic regions of the cord, with which the brain maintains a close sympathy. "I have seldom observed," says Brodie, "the sensorium to be materially affected, except where the injury was in the cervical portion of the spinal cord."

The heart is not directly dependent on the spinal cord, but indirectly, through the ganglionic system and consequently is not liable to the same sudden paralysis as the voluntary muscles; nevertheless "the first effect which a severe injury of the spinal cord produces on the circulation is to lessen the force of the heart's action and to cause a state of general depression and collapse, the pulse being very feeble, contracted, and sometimes scarcely perceptible. When the injury is in the lower part of the neck, the patient not infrequently dies before complete reaction is established, the pulse remaining feeble to the last. In the majority of cases, after the first twenty-four hours the pulse rises to 96 or 100 a minute; but still it is feeble and contracted, indicating a state of great general debility. The appearance of the tongue corresponds to the character of the pulse; it is not unusual at the end of twenty-four hours to find it dry and parched, covered with a brown fur, which is soon converted into a black crust, resembling what we observe in the last stage of a continued fever."

The blood also has the characteristics of fever, the coagulum being large and loose, or soft as when its vitality is reduced by miasmatic poison.

The analogy of the conditions produced by obstructing the action of the brain on the body to those produced by the devitalizing power of malaria and the consequent fever is quite striking, and it is a curious coincidence that in a case described by Sir Charles Bell, in which there was a fracture of the eleventh dorsal vertebra death took place on the fifth day, preceded by *typhoid symptoms*—symptoms of which indicate inflammation of the ileum, which is

controlled by the lower dorsal portion of the cord — the portion injured in this case.

Injuries and morbid conditions of the brain produce a great variety of morbid conditions in the body, and Dr. Brigham remarks that "after death from injury of the brain, putrefaction of other parts of the body takes place much more rapidly than after death from the injury of other organs."

The direct injury of the brain by miasmatic poison, which is the cause of typhus fever, develops a group of symptoms singularly analogous to those which follow the impairment of its influence by injury of the spinal cord.

"Most of the fatal cases of typhus (said Prof. Graves) at present die of cerebral disease." "In the genuine typhus fever (says Dr. Gerhard) this is almost always the case: Very few patients die of this disease without strongly marked cerebral symptoms." And yet there is seldom any appearance of inflammation of the brain in such cases. The functional impairment of the brain alone is enough to destroy life.

Without looking farther, we have facts enough to establish clearly that all life depends upon the brain, and that just in proportion as the influx from the brain is hindered by any injury to its well-protected channels, every vital process is deranged or suspended. If the hindrance be absolute and complete, death is immediate, for the death of the body deprives the brain of the conditions and elements necessary to retain vitality.

Injuries of the nerves also by cutting off their dependent parts from the spinal cord, show similar results, in loss of vitality and predisposition to disease. It is stated in the *Medico Chirurgical Review*, vol. 22d, that Mr. Earle cut the ulnar nerve behind the elbow, and that in consequence the fore-arm became disposed to constant attacks of inflammation, and the temperature of the little finger was four degrees lower than that of the other.

According to Demarquay (*De la Regeneration des Organes et des Tissus*) when a nerve has been *cut*, the central end, in connection with the nervous system does not degenerate, but the exterior end does, rapidly, undergoing a fatty degeneration,

completed in six or eight weeks. The muscles begin to degenerate in about three weeks. But with regard to paralyzed nerves and muscles which *retain their connection* with the central system, it is remarkable how well they are preserved for a long time. "It is a common observation (says Dr. Poore) that after a hemiplegia has endured for many months, the wasting of the muscles is often trifling in the extreme, and as often as not, the electric irritability to both forms of the current remains the same as on the healthy side. If, however, a man injures a peripheral nerve — say his ulnar, or one of the branches of the external popliteal — it is astonishing with what rapidity the muscles supplied by the injured nerve waste, and how soon the electric irritability becomes altered." The muscles cut off from their nerves would not only waste away and lose all irritability but would also die and rot, if it were not for the vascular connection which brings them living blood, and also the influence of the ganglionic nerves, which are co-extensive with these blood vessels. Claude Bernard claims that the growth and changes of all the organs are affected through the nervous system only by the control of the blood vessels, but in this case we see the blood vessels and their nerves uninjured and the blood supplied, but atrophy occurs because the vitality from the brain and spinal cord has been cut off, except so far as it may be supplied by the blood and the vasomotor nerves. If the theory of Bernard were true, there could be no atrophy after the section of a muscular nerve. Yet Bernard is one of the most eminent modern physiologists, and in trying to locate vitality in the tissues instead of the central nervous system, he is merely following the mechanical anti-vital drift of the profession, which he has carried to the *reductio ad absurdum*.

There is a great wasting of the muscles even when they are not cut off from the cord and brain by section of their nerves, in cases of hysterical paralysis. In these cases there is a loss of sensibility as well as motion, and consequently the muscles can have no reflex influence from the cord, and it no longer sustains them.

The ganglionic system extending along the spinal column, and sending its ramifications along all blood vessels has been

regarded as an independent seat of life, but in man, at least, its action soon ceases when the influx from the brain is cut off.

How clearly does it appear, when we consider all the facts, that life in the body is an influx from the brain, not only in its voluntary but in its involuntary processes, all of which are controlled by the action of the brain and responsive to its emotional conditions, which not only control every secretion, every movement of fluids and every vital change, but transmit a similar life with all its psychic and physiological peculiarities to a new being in the womb.

And yet so strong is the domination of habit and of world-wide opinions, that I retained the old Biological ideas on this subject longer than I am willing to confess, without comparing them with facts. Like other physiologists I regarded the brain as an addition to a solid system of life developed at a lower stage of being in the body and the nerves — not perceiving that as life is in all cases an affair of the nervous system it must necessarily centralize in the highest developement or controlling structure of the nervous system, instead of remaining in its subordinate parts — as it is a law of the animal kingdom that with advancing developement the functions diffused through the body shall become centralized in organs of greater power and superior organization. Thus the heart becomes the chief reliance for circulation, instead of the diffused capillary system, and the brain, instead of the spinal and ganglionic systems, which still remain in a subordinate position as do the capillaries in the circulation of the blood. To ignore the brain as the chief seat of life would be as unscientific as to ignore the heart as the cause of the circulation.

The materialistic physiologists who ignore the concentration of life in the brain, and suppose the spinal cord and adjacent ganglia to be the entire *sources* of the organic functions to which they hold an immediate executive relation, have reflected but little upon the absolute dependence of all upon the brain, and the speedy suspension of all when the influx from the brain is interrupted.

It is characteristic of animals to scan phenomena closely without dwelling upon or even discovering their causes, and it shows how little the general intelligence of the human race has advanced

beyond the stage of animal life, to observe that in the days of Harvey, almost the entire medical profession could look at the passage of red blood from the heart and the return of the venous blood toward the heart, the arrangements of its valves and its forcible action, without realizing that the heart was the active agent of the circulation, but stolidly rejecting the idea, and treating with coarse derision this simple and manifest discovery.

Is it not the same intellectual incapacity to-day which hinders the recognition of the paramount power of the brain as the seat of vitality, and the consequent direction of investigations to discover the locations, the laws and the philosophy of life in the seat of its existence by comparative developement as illustrated by Gall — by accurate pathological investigations of psychic as well as physical functions; by the study of the marvellous facts developed by the cultivators of animal magnetism, or by my own method of vital excitation of the brain and psychometric exploration of its functions.

The method of Gall (studying comparative developement in men and animals) was eminently rational, and no one has ever followed that method as a student of nature, without realizing that Gall had made many important discoveries. But his method was abandoned, by the profession generally, for no reason apparently, but its aversion to psychic studies. His inaccuracies were treated as falsehoods, and a host of frivolous objections were brought forward, the majority of which were based on ignorance of the subject and ignorance of the doctrines of Gall — and under such influences the present generation of physicians has become confirmed in the prejudices of ignorance against a science of which they have no valuable knowledge.

Hence it is that my demonstrations of the brain, before the Boston committee of physicians, before the Faculty of the Indiana State University, and on many other occasions in collegiate institutions, has produced no impression on the profession beyond the sphere of my personal presence, and the repetition of my experiments by the famous Prof. J. K. Mitchell, of the Jefferson Medical College of Philadelphia, produced no more impression than a sky-rocket would make on the darkness of night.

Prof. Mitchell was a man of genius, but not of the moral courage which appreciates, upholds and diffuses truth. He could not realize the splendor and the power of a revelation of the functions of the brain, which he knew would make even less impression upon the well organized and consolidated mass of the medical profession than did the discovery of Harvey, which was so simple and so easily within the grasp of the humblest intelligence. Hence he ceased to speak of the subject or manifest any further interest in it, and for these forty years past, physiological instruction has gone on, blind to the greatest and most fundamental truths, the ignorance of which has had far more serious and disastrous effects than the ignorance of the circulation, for it was an ignorance of the basis of all medical philosophy, ignorance of the basis of insanity, ignorance of the philosophy of animal magnetism, and ignorance of the greatest powers of the human mind, through which all rapid intellectual progress will hereafter be made.

The state of intellectual hebetude which permits the cultivation of physiology, in the study of its minor phenomena, to the neglect of the brain, with a vague and dreamy notion that the brain, as to its convoluted structure, maintains some vague relation to psychic phenomena in their aggregate, without having as all other nervous structures are known to have, specific functions in special structures, and without realizing that its wonderful psychic powers are anything more than results of chemical and mechanical processes, is partly the result of our miserably defective education, and partly the result of imperfect developement of the higher faculties which seek and appreciate the highest truths, and cannot therefore be overcome until a higher ethical condition shall place society or at least its teachers, on the plane of philosophy which is far above the animal nature.

When we understand clearly that life is located in the brain and its subordinate spinal and ganglionic structures, we may enquire whether it *originates* there, or comes by influx and is replenished from the limitless ocean of unembodied life which is invisible—whether the over-soul of the universe does by any intelligible species of influx sustain and develope the life of individuals,

which seems to be a fragment of the Divine nature — will wisdom and love.

That there is such an influx I believe, for as life is the potential element that survives the body, and is therefore distinct from all material structures, and capable of growth and development while in the body, it must have an influx distinct from the influx of food, and that influx must come from other life, or vital elements which are also distinct from matter.

Whether and to what extent this influx is a direct, immediate influx from the spirit world, or is an indirect influx by coming in with organized matter, and developing from food and air is a profound question. To me it appears that we have both the direct and the indirect influx, and that there are potentialities in food and air which are received into the body, and combined with, as subordinate to, the higher influx which is purely spiritual. The discussion of this would be out of place here, further than to say that the healer may often use this spiritual influx for his own benefit and for that of his patient. The great positive life must be the source of all other life, controlling all evolution of life on this globe, inflowing to man before birth, and continuing through life, which influx controls the subordinate influx of light, oxygen and food. After this subordinate influx has ceased, and the body has become unfitted for farther influx of life through the nervous system, the vitality or soul which takes its departure becomes in a far higher degree the recipient of a continued influx. The non-perception and non-recognition of this influx by scientists is no objection to its reality. The chief stars of the stellar universe are unknown and unrecognized — by the common mind — by those who have not used the telescope — and no matter how many hundred millions ignore or disbelieve the invisible influx, its distinct perception by a single telescopic mind establishes its reality.

When the laws of Divine influx are studied and obeyed, there will be men and women with nobler physical forms, far less liable to disease, or to early decay and death. The study of the brain and soul will lead to that noble result.

With this hasty glance it will be apparent that I regard the brain as the source and not the consumer of life, and that we may, advantageously, stimulate the brain for sanative effects, when we understand its organology. The natural stimulus of the brain, as our spiritual energies are roused in conquering obstacles, pursuing our pleasures and enjoying society, develops our entire being, physical and mental. Force of character, arising from the occipital brain, not only leads to success, but energizes and develops the body. Men degenerate when confined for twelve or fourteen hours to quiet, humble work, and deprived of the exercise of the active ambitious faculties of the occipital region. Cerebral energy is therefore an essential condition of health, and the treatment of the brain, which requires accurate knowledge, is an important part of nervauric treatment.

CHAPTER III.

SARCOGNOMY — GENERAL VIEW.

Definition of Sarcognomy. Its origin. Why do we recognize psychic influences in the body. Contrary to prevalent medical doctrines. The misdirected energy of the medical profession. Incapacity of the colleges for psychic investigations. The body has no psychic functions in man. Conscious life in the brain. physiological processes in the body. Soul controls both. The triple reaction is the process of life. Vagary of Leibnitz. Failure down to the present age to investigate these problems. The five great reasons for the failure. Ruskin's view of it. Gall and Swedenborg. Purpose of this work. Necessity for Sarcognomy. Its bases, philosophical, physiological, pathological and experimental. The triune sympathies. Illustrations of Sarcognomy. To be treated only as a basis for healing. The three methods Indications of impressibility. Psychic treatment. Manual treatment on brain and body. Correspondence of soul, brain and body. General statement and directions for operating. Laws of location of the organs.

THE word **SARCOGNOMY** was coined in 1842, as the name of the new science which arises from the discovery of the compound psychic and physiological character of the human body, revealed in the experiments in which I ascertained that the same psychic and physiological effects which I produced on the head could be produced on the body.

Derived from *Sarx* or *Sarcos*, flesh, and *Gnoma*, an opinion, it means *etymologically* a knowledge of the flesh, or recognition of its character and relations. Practically, as the name of a new science, it means a knowledge of the physiological and psychological powers which belong to each part of the body in health, in excitement and in disease, and consequently an understanding of the correlation of soul, brain and body.

I had discovered in the human body its pervading and controlling influences, exercised through the nervous system, and recognized at its surface as physiological and psychological, by experiments made in 1842, and published by my lectures, by the

Journal of Man and System of Anthropology — and applied by myself and pupils in the treatment of disease.

But why do we recognize psychological influences at the surface of the body? The life forces of the body as heretofore understood are solely physiological; and physiological powers are regarded by the materialistic school, which predominates in the medical profession to-day, as mechanical, chemical and electrical — resulting from the same elementary forces which belong to the mineral kingdom, which is void of life. Hence there can be nothing psychic in the body, nor anything which (according to the leaders of the old-fashioned portion of the medical profession) will not ultimately be resolved into chemical processes.

(Note — Hence the physiological zeal of the medical profession to-day is directed mainly to the chemical processes and laws which are manifested in living bodies — the consequences of which will continue to be, as they have been, an immense addition to our stock of chemical knowledge, accompanied by an immense neglect of the science of life, and an increasing *intensity of ignorance* of true vital science, which is sadly impressive to one who understands the psychic elements of humanity. In looking at a trained pugilist, athlete, gladiator or acrobat, we are impressed with admiration of their superior physical powers, but when we come to know them as men and look for something more than skilful muscularity, we feel a great disappointment. So when we look at the achievements of the medical profession in the physical sciences connected with man — their vast accumulations in anatomy, minute histology, chemistry, pathology, mechanical and chemical physiology and comparative biology, we are profoundly impressed with the greatness of their extremely laborious investigations and achievements in the physical sphere; but when we come to the ethical sphere, to the achievements of the science as a benefactor of humanity, we are painfully impressed with the slowness of progress and the stolid neglect or active hostility displayed toward the noblest works of scientific philanthropy — the healing of the sick by new remedies and new methods: and although this barbaric insensibility has greatly diminished within fifty years, there is still enough to maintain a fierce hostility against the only method of medical practice ever discovered which is incapable of doing any harm by its own curative agencies.

This digression naturally comes before us when we realize that the preoccupation of the mind by exclusive physical science and by the dogmatic conviction, enforced by all surrounding authority, that nothing but physical science has any reality, establishes a mental condition totally unfitted for the study of life which is not physical, and of its laws, which are widely distinct from those of the laboratory, as much as a life devoted to pugilism would unfit one to cultivate and practise the Christian virtues. Thus, as national wars have prevented the growth of true religion, so does a *dogmatic and intolerant* materialism, pervading every department of scientific education, disqualify for vital and psychic studies, although physical science *per se*, in its proper place, and unaccompanied by the

dogmatism which sneers at evidence, is entirely harmonious with and beneficial to the cultivation of the higher departments of science. I do not, therefore, anticipate any proper investigation of my own scientific discoveries by the scientific societies or universities, until they have undergone such a change in their dominant spirit as will probably require a century for its accomplishment. When that time arrives — when thousands of investigators, in a philosophic spirit shall carry on those investigations which adverse circumstances have not permitted to myself — the brilliance of that era will contrast with this century as *it* contrasts with the middle ages of Europe.)

We need not affirm that the human body *per se* performs any psychic functions, although the voluntary action of the body of an alligator after decapitation would seem to indicate the presence of a psychic or conscious element, which, as we descend in the animal kingdom, is less concentrated in the brain.

In man is verified the general law of the animal kingdom, that functions are more centralized and separated as we ascend in the scale. The psychic faculties are concentrated in the brain, and there is no conscious sensation or perception in any part of the body, until the impression originating there has been conveyed along some nerve to the brain. As sensation and perception are thus realized in the brain, and never without its cooperation, it would appear erroneous to locate them in the body at all. The body, however, is the seat of physiological processes, and the brain of conscious life, which operates upon and through the body, and the soul is life itself, which operates through the brain, and through the brain reaches the body, in which its impulse and influence are manifested as when an emotion or passion of the soul, such as love or anger working through the brain, makes its expression in the body, by the voice, the actions and the circulation of blood.

The process of life however, is not merely action of the soul on brain and body, for the conditions of the body in health and disease continually react on the brain and soul, and under the influence of alcohol or of fever, the psychic action is entirely changed. The mind and character are thus modified by the conditions of the body, and all life is the reaction between soul and body, through the brain, the grand centre in which we find and interpret all the powers and principles of psychology and physiology.

(Note — Of all the baseless speculations of metaphysical philosophizers, the greatest departure from the truth was the doctrine of Leibnitz that there was no reciprocal influence between the soul and body “ everything (said Leibnitz) takes place in the soul as though there were no body, and in the body everything takes place as if there were no soul.”)

Familiar as this has been to all mankind, and forcibly as it has been exemplified in the processes of disease, under the daily observation of many thousand physicians for many thousand years, I know of no systematic attempt to bring this chaotic mass of phenomena under the jurisdiction of science. It has always appeared to me very remarkable that men of scientific and literary pursuits should be so entirely and passively content in ignorance of the boundless worlds of surrounding truth yet unexplored, even when these truths are a part of their daily and hourly experience. For this there appear to be four evident reasons. The engrossing necessities of subsistence, of labor, business, pleasure and ambition leave the multitude little time for even serious thought upon the mysteries of life.

Secondly — The engrossment of ambitious minds in their immediate environment, and the consciousness of their own energetic capacities and success, give them a feeling of self-sufficiency, an exalted idea of their own attainments, and a habitual unconsciousness of the infinite realm of the unknown upon which we have made so small an encroachment. Thus arises a tacit notion expressed in acts but seldom in words, that we have nearly attained the boundaries of the knowable, and that attempts to explore new regions originate fanciful delusions, scarcely worthy of serious attention, as there is nothing very important to be discovered.

Thirdly — As the engrossing pursuits and delusive ambitions of our leading people produce a state of mind unfitted for the exploration of the unknown, this disability is vastly increased by our systems of education, which utterly fail to develop invention, originality and power of independent reasoning. Hence the few fitful efforts to investigate and explore are generally profitless, and productive of crudities or delusions, and the feeling is fostered that the unknown is chiefly the unknowable.

Fourthly — A dominating love of scientific and philosophic truth for its own sake is a rare quality, and seldom strong enough to induce any one to devote himself to the unknown, when the result of success is the developement of existing error and ignorance, offending the vanity of the entire class of teachers and leaders, and isolating the discoverer from the sympathy and fellowship which are essential to success in all pursuits. In all professions and classes the existing state of opinions is maintained not only by that *immense power*, the inertia of fixed habit, but by an unyielding hostility to innovation. The medical clerical and legal professions and the business classes also, furnish so many illustrations of this, that a very instructive volume might be made by a periscopic view of the steady warfare against truth and its discoverers throughout all the historic ages — a warfare still maintained with energy, though the battle fields are changed, and the soldier, jailer and executioner have little to do in the modern processes of freezing and drowning unwelcome arrivals from the Divine sphere of wisdom.

Fifthly — In all ages the spirit of dogmatism has made men unfair and intolerant towards all opinions but those into which they have been educated, or have been led by passion and prejudice. At the present time materialism rules, and the scientific classes imbibe it in their education unconsciously. Hence there is a prevailing disposition to ignore everything that is not materialistic, and to meet the profoundest truths with that supercilious contempt which prevents all candid investigation. Biological questions are studied in so one sided a manner as to justify in some cases the sarcasm of Ruskin that scientific men have so contracted modes of thought that "if beyond this safe and beneficial business they ever try and explain anything to you, you may be confident of one of two things, either that they know nothing (to speak of) about it, or that they *have only seen one side of it*, and not only have not seen, but usually *have no mind to see the other.*"

Such are most apparent explanations of the remarkable fact, that now near the end of the nineteenth century, no one has yet attempted to explore and describe the triune constitution of man —

union of soul, brain and body, and the laws of their vast and various sympathies and interactions, which are of so grand importance not only in Medical Philosophy and Therapeutics, but in Hygiene, Education, Mental Philosophy, Ethics, Æsthetics, Sculpture, Painting, Forensic and Dramatic Eloquence, and last, not least, Pneumatology. These remarks apply of course to the prevailing doctrines of science and philosophy—to what is recognized in the Universities. I do not refer to the bold exploration of the brain and its psychic functions by Gall nor to the still more extraordinary scientific doctrines of Swedenborg, both of which the colleges have laid aside without investigation, and neither of which has grasped the entire problem of the triune constitution of man.

In this book I propose to present but one of these ten aspects of Sarcognomy — viz., its therapeutic utility, and the instruction which it gives us in reference to healing the human constitution by the hand, the electric poles, and the various external applications which produce different effects as they are applied to different parts of the body.

A knowledge of the physiological and psychic forces or influences connected with each part of the body is as necessary to judicious treatment by Electricity as Anatomy is to surgery; and the present state of Electric Therapeutics may be compared to the condition of surgery at the siege of Troy, anterior to anatomical dissections.

Equally necessary is it as a scientific basis for Nervauric practice of what has been called Magnetic Therapeutics or treatment by Animal Magnetism, and for the blind, clumsy processes called Massage, which have arisen from a sense of the necessity of manual treatment, and have been adopted in blind ignorance of the neurological laws of vitality, as well as disregard of the extensive experience of magnetizers during the last hundred years.

The philosophical basis of Sarcognomy is the three fold constitution of man, and the very intimate sympathy and parallelism of soul, brain and body, which enable us through either of the three, to affect the other two in a corresponding manner.

Its practical physiological basis is the fact that the exercise of

every psychic faculty, emotion or impulse produces a characteristic and definite effect on the body, and a special excitement in a corresponding portion, while the exercise of any portion of the body produces a characteristic effect on the brain and mind, the locality of which can be specified on the brain.

The pathological basis is the fact that every disease of the body affects the brain and produces a particular and distinct effect on the mind, so that diseases have a mental as well as a physical symptomatology, which has been especially observed by Homœopathic physicians.

The experimental basis is the fact that in applying the hands or fingers upon the head of an impressible person we stimulate the subjacent portion of the brain, and rouse it to the manifestation of its functions with a vigor proportioned to the impressibility, the physiological and psychological results being a complete development of the cerebral functions — and that the application of the hands on the body produces the same evolution of the physiological and psychic functions as the application to the head at the corresponding locality.

Thus the entire surface of the brain corresponds to the entire surface of the body, maintaining therewith an active sympathy in our experiments, precisely as it occurs in the progress of diseases and local excitements. The facts of diseases sustain the localization of Sarcognomy, and the map of Sarcognomy explains the philosophy of disease.

Sarcognomy is also illustrated by the laws of developement, by natural language or gesture, and by the intuitive judgment which arises in our minds on seeing different forms which express different characters — the whole person being as expressive as the face to close observers. When we contrast Venus and Hercules, Jove and Apollo, or Washington and a degraded sot, or a lion and a lamb we realize that the entire form is an embodyment of character.

Putting aside the pathological, philosophical and physiognomic aspects of the subject, I propose to treat Sarcognomy only as the basis of the practical art of healing.

In acting upon the triple combination of soul, brain, and body we may fix our attention as appears best on either one or all three.

If the constitution is highly impressional (manifested usually by breadth and height of the front head) mental influence will be efficient, and the nervous system will respond readily to nervau-ric treatment. This impressibility is greater among the natives of warm climates, greater in summer than winter, and generally greater in females than in males. Breadth of the temples from right to left and largeness of the pupils of the eyes, with fullness of the upper part of the face are favorable indications.

A simple method of testing this impressibility is to pass the ends of the fingers close to the open extended hand of the patient, who, if impresible will feel a slight coolness at each passage of our fingers. When this occurs, we may be sure that the application of the hands on the body or head will be effective.

I recommend the application of the hands on the body for the purpose of healing, because the disease being located in the body and the vital forces emanating from the spinal column, it is desirable to approach as near as possible to the difficulty that is to be removed, and the seat of the vital force on which we operate.

It is true that diseases may be treated by the soul power alone, without any contact — the health benevolence and will power of the operator being effective without contact upon the patient who sits near him or in some cases at a distance, if the proper rapport exists, but in the present condition of society in northern climates it is only a small minority who can be treated in this way.

Contact is generally necessary to efficient treatment, as it is to efficient contagion, and it is too evident for argument that the farther apart two persons are placed, the less effect they can have upon each other.

The contact of the hand with the skin is therefore desirable for the most complete effect, and the fewer the garments between the hand and the patient the better. Nevertheless patients are successfully treated without removing any of their clothing. The vital influences emanating from an operator are more diffusive in propor-

tion to their subtlety, and while caloric and electricity are resisted by clothing, the subtler forces, which reach to great distances, are not hindered. Operators in whom these subtler forces are abundant, and who produce effects without contact, are not hindered by clothing. There is a class of patients who realize the effects of the hand when it is not even in contact with the clothing, and a class who feel the influence, not only of persons at a distance, but of their departed friends, and even the ancient inhabitants of the spirit world.

In operating upon the body, we have the advantage that we may use percussion, friction and dispersive passes — the friction and percussion not being applicable upon the head.

Effects produced on the body are local and physiological, but become *psychic*, in proportion as the brain sympathizes with the spot. In persons of a low grade of susceptibility there is less sympathy between the mind and body, and operations on the body do not produce the distinct psychic effects which occur in the impressible.

Effects produced on the brain are mental and become physiological only as the cerebral influence extends to the body. But as the brain is the controlling organ, it is obvious that it may produce any amount of physiological action, and forty years ago I operated chiefly through the brain, being interested in demonstrating its physiological powers. /When we wish to do all that is possible, we should operate on body, brain and soul, treating the latter by our own psychic force of will and emotion with a resolute desire to cure, and rendering the individual as passive as possible by the methods I shall explain. The desire to heal, born of love, is the healing agency, and the force of will or occipital energy is the power that subdues the patient to passiveness.— a power which may exist without a high degree of healing capacity./

CORRESPONDENCE OF SOUL, BRAIN AND BODY.

When we make a map of the cerebral organs and understand

their relative positions, we are well prepared to understand their correspondences on the body, which are very simply arranged.

The superior part of the brain corresponds to the superior part of the body, the basilar portion of the brain corresponding to the lower half of the body. The lateral ventricles of the brain corresponding nearly with the upper part of the waist. The lower end of the trunk corresponds with the base of the brain, as externally indicated at the junction of the head and neck.

The limbs are a departure from the compact form which would most easily coincide with the head. The lower limbs correspond with the basilar region, represented or covered by the neck. The upper limbs correspond with the Brachial region of the occiput, which starts from Firmness and extends down the middle of the occiput, embracing the regions appropriated to Ambition, Ostentation, Self Esteem, Self Confidence, Love of Power, Arrogance and Hostility.

The superior anterior fourth of the head corresponds to the anterior surface of the thorax, and is marked Thoracic. The face corresponds to the abdominal region. The entire occipital region above the Crural, and exclusive of the Brachial, corresponds to the back and is called Dorsal.

From this investigation we learn that the posterior half of the brain controls and impels the forces of life which belong to the spinal column and the entire back and limbs, while the lovely and intellectual elements associate with the breast, and the sensitive, impressional, relaxing elements coincide with the abdomen. Hence to invigorate the vital forces, the hand should be applied to back of the head.

If applied upon the neck, it invigorates the lower limbs, sending the circulation and vital forces downwards, warming the feet and sustaining physical vitality. The organ of Vitality, or rather Vital Force, is at the base of the occiput, and its correspondence at the posterior summit of the thigh. Hence the application of the hand on the back of the neck is an excellent method of renovating exhausted vitality, invigorating locomotion and relieving determi-

nation of blood to the head and chest — effects which may be enhanced by applying the hand at the summit of the posterior aspect of the thigh, on the region of Vital Force.

When one hand is applied upon the occipital base and the neck, and the other upon the upper half of the occiput, we produce a powerful and health giving effect, as the upper part of the occiput (corresponding with the upper half of the back) contains the most perfect sanative energy of the constitution, in the organ of Health and its surrounding group. (Health is indicated in the map by the letter H.) The application of the hands upon the upper part of the occiput and upon its base or junction with the neck, corresponds with their application on the shoulder blades and the summit of the thighs and base of the trunk — with this difference, that a relatively larger space may be covered on the head, and if, instead of touching Health and Vitality with the fingers, we apply the whole hands, covering nearly the whole occiput, we cover a space corresponding to the entire back and arms, and thus produce a very extensive effect, rousing the entire will power and physiological energy.

In applying the hands upon the superior anterior region of the head, which corresponds with the anterior part of the thorax, we produce the amiable and soothing influences which belong to the gentler emotions. We may proceed now in this consideration of the different regions of the head, which the unskilled may cover with the hand, and hereafter will proceed with the specialization of organs which the skilled operator understanding localities, may touch with the ends of the fingers, when a more special and limited influence is desired.

The influence of the anterior superior region of the brain is remarkably soothing and happy, rendering the patient entirely amiable, good natured, patient, obedient, cheerful and more impressible to the nervauric treatment. Hence it is often desirable to impress this region to establish the best relations between the physician and patient. But we should be careful not to carry it too far, for it antagonizes the base of the occiput, in which the strong physical energies and impulses reside. These

it reduces to tranquillity by a quieting and anodyne influence, but when the vital forces are very feeble, they would become too quiescent and weak under continued excitement of the coronal region, the tendency of which is toward trance, or complete suspension of physical activity. The special locality in which this tendency to trance exists in the highest degree, is about an inch and a half at each side from the sagittal suture, nearly at the posterior corners of the rectangular space assigned by Gall and Spurzheim to Veneration.

In operating on the superior surface of the brain, we should understand, that by the general law of organology, we find stronger influences as we go back, and gentler toward the front.

If we understand the general laws of organology, we are less dependent upon the memory of special localities. The controlling principles are quite simple. The energy of any organ may be determined by its anterior or posterior position. The intellectual and sensitive organs of the extreme anterior portion of the head are not only void of physiological power, but tend to check and exhaust it. The back of the head, the extreme occipital portion, gives power and ambitious impulse. Between the posterior pole of power and the anterior pole of weakness, position determines the power, and when we think of any faculty, emotion or impulse, we can determine its longitude on the head by a consideration of its energy. Thus Modesty would be anterior, as Vanity would be posterior. Liberality and generosity would be anterior — avarice posterior — sympathy anterior, stubbornness posterior etc.

The latitude or height can be determined with equal ease by the proper rule, as it corresponds to the moral elevation, and thus I have taught an intelligent class in an hour to locate any faculty in its proper organ with approximate correctness.

Organs are higher in the brain as they are of a more kind, loving, spiritual nature, and lower as they are more animal, selfish, and violent. Love and tenderness are at the summit — hate and cruelty at the base.

A similar law applies to the body. The vital forces are at the back. The spinal column is the commanding region. The

upper portion of the back is the seat of those normal powers which happily combine the moral and physical influences, and in their greatest developement produce the best results. A large developement of the shoulder is the best conformation for a superior constitution, while the developement of the thighs and lower part of the back gives the greatest vital force, but with less moral power and equable, healthful action. The passions and appetites are below — the nobler impulses above.

Anteriorly, above the diaphragm, we find the gentle and refining influences; below the diaphragm the sensual, sensitive and morbific.

This general survey indicates the obvious principles of nervauric treatment. The entire posterior half of the surfaces of the head and body constitutes the tonic or invigorating region, the region of vital power, upon which the nervauric healer will chiefly expend his energies — the treatment being applied higher or lower according to the location of the disease. In the majority of cases, both upper and lower energies require to be roused, but in all cases the upper posterior region of the head and body requires special attention.

In the application of electric currents, the backward direction (towards the spine) is the most generally beneficial, and the upward currents are more extensively beneficial than the downward.

CHAPTER IV.

THE SPINAL REGION — ITS ANATOMICAL, NEUROLOGICAL, AND THERAPEUTIC RELATIONS.

Duty of the healer. Necessary predominance of the upper posterior regions. Their antagonism to the abdominal region. Upward passes. Morbid tendencies and vital relations of the abdominal region. Dispersive passes. Medical applications. Spinal regions. The cephalic — its arm power and brain power. Description of the cephalic region. The brachial plexus and other nerves of the cephalic region. The phrenic nerve, its extensive distribution and relations. The vertebral ganglia and arteries, subclavian and vertebral — their control over vital powers. Anatomical explanations. Power of the cephalic region. Electric experience of Dr. Rockwell. Muscles of the cephalic region. Importance of the cephalic region in fevers — testimony of Drs. Gerhard and Beard. The upper dorsal nerves. Second dorsal nerve and the pupil of the eye — cilio-spinal region — its nerve channels. Testimony of Onimus and Legros. Thoracic and abdominal divisions of the dorsal region. Pulmonic influence of the dorsal region. Cardiac region of the cord. Anatomical structure of the thoracic region. Corporeal region of inspiration. Its pathological conditions. Upper and lower regions of chest. Illustrations in sunstroke, insanity and typhus. Treating the heart through the dorsal region. Its relations to the neck. Connection of cephalic and thoracic regions — complex arrangements. Upper cephalic region, phrenic nerve and its distribution. Respiratory combination. Relation of coughs to lower dorsal region. Demonstration of this region in experiments of Onimus and Legros. Effect of injuries. The diaphragm — its spinal and phrenic relations — phrenic zone. Explanation of coughs and their treatment. The diaphragm and its treatment. Abdominal influence on respiration. The lower dorsal region — its abdominal influence and anatomical relations — Valentine and Brodie — general view.

Lumbar region — its ganglia and spinal plexus, anatomy and functions. Illustrative cases. Description of its nerves and physiological inferences. Lumbo-sacral region, nervauric experiments and observations of physiologists, Longet, Breschet and Budge. The sacral nerve, sacral plexus and hypogastric plexus. Commingling of functions round the lumbo-sacral location. Genito-spinal ganglion. Electric currents. Sexual power and animal force. Relations to brain of the leg, foot and pelvis. Lethargy and insanity. General view of spine.

Correlation and combination of functions :—Van Kempen's experiment. Roots of the nerves. Complex relations of the heart with ganglia, phrenic nerve and spine. Relations of thoracic part of the cord. Cervical ganglia and pneumogastric. Heart and diaphragm. Relations of splanchnic nerves. Combination of brain, lungs and stomach. Connection of cardiac and pulmonary nerve forces. Comparison of functions and anatomical structure.

THERAPEUTIC TREATMENT:—Importance of spinal cord. How to invigorate the brain and the entire constitution. To invigorate intellectual powers for special purposes and for oratory. Developement for action, for excellence, for conquering difficulties. Developement through the head. Treatment of the lungs on the body and the head — the pulmonic zone. Treatment of pulmonary diseases — hemastasis. Stimulating the diaphragm and recovery from axphyxia. Treatment of the liver. Treatment of the stomach. Cure of intemperance. Treatment of the bowels. Evolution of heat. The urinary organs. Treatment of the sexual organs. Treatment of paralysis of upper and lower limbs, and use of electricity. Six different methods of treating the spine — vital, Galvanic, Faradic, mechanical, medical and counter-irritation. Treatment of hemiplegia.

THE enlightened healer understands that he must not merely remove the existing disease and the morbid elements in the body, which was the general aim of the drug practice (operating very often with remedies on which there was little reliance, because they had so often failed), but that he must, by that direct and congenial aid which drugs could seldom give, rouse each organ to more vigorous performance of duty, and rouse the whole constitution from its depression, to assist by the general vital force each special organ, and then, if possible, so invigorate the psychodynamic health-region, as to place the whole being on a higher plane of life.

There are certain general principles to be continually borne in mind. Health, happiness, and efficiency depend on the predominance of the upper half of the back and the upper half of the occiput — over the abdominal region of the body, and the anterior inferior region of the brain covered by the face.

(Note — This does not imply that the abdominal region is the seat of injurious influences, or that it is not absolutely necessary to human life and harmonious developement, but simply that the abdominal region has not the vitalizing, elevating and protective power which belongs to the chest, and that if it were the ruling element of the constitution, there would not be sufficient vital force to animate and perfect the crude material which it introduces but does not fully vitalize, and to resist the malign impressions to which the nervous system of the abdomen is continually liable. The vitality which enters by the brain and chest, elevates the constitution from abdominal helplessness, and as soon as the thorax ceases to act in respiration the fatal decline of life begins. A low grade of life, such as that of the oyster, may exist when the digestive apparatus is the chief element of the constitution, and the respiration is reduced to a minimum.)

Upward and backward passes over the front of the body, but especially over the abdomen, are of great benefit in nine tenths of the cases of disease. When you find one fatigued, debilitated, feverish, melancholic or depressed in any way, the brisk upward passes over the abdomen, either upon the clothes or upon the uncovered person, are always felt as restorative, refreshing and strengthening. The abdomen is the castle and battle ground of disease, where life is busily engaged in conquering, to assimilate the dead matter introduced, and where the portal vessels gather the most degenerate and devitalized blood of the whole body. There are the abundant nerves, the acute sensibilities, and the atonic relaxation which invite disease. There is the continual gathering of all the foul, dead and morbid matter of the body, prior to its expulsion; there is the open thoroughfare of dead matter, coming in to be vitalized, and taxing the resources of vitality to lift it to a higher condition. If it is not at once controlled and partially dissolved by the healthy energy of the secretions, it becomes an immediate oppression and cause of debility, disease or suffering. The abdominal organs are therefore a continual tax upon the constitution, to assist their battle with dead and decaying matter, and its accumulation either as undigested food, or as unexpelled decomposition, lowers the general vitality, which gains its maximum vigor, only after the expulson of the waste, and the digestion of the food supply.

Concentration of excitement to the abdomen is lowering, and its dispersion is invigorating — hence in addition to the upward and backward passes, dispersive passes from the lower region of the abdomen down the thighs are highly beneficial, transferring the excitement from the hypogastric region of depression to that of physical force — the thighs and legs — as the upward passes carry it to the shoulders.

[The doctrine that the relaxing influences belong to the abdominal region, and the energetic influences to other portions of the constitution, is illustrated by many familiar facts, beside the terribly debilitating and prostrating effects of abdominal diseases. Whenever we make a vigorous exertion, calling forth our maximum

energy, the abdomen is powerfully compressed by the abdominal muscles and diaphragm, the descent of the latter being sustained or aided by the closure of the larynx, retaining the air in the chest, the compression of which assists the downward pressure. Without this compression of the trunk, driving out the abdominal blood into the muscular system, brain and spine, our maximum energy cannot be attained. On the other hand, the congestion of the blood in the abdominal region from any cause is extremely depressing and dangerous, as we see in congestive chills and the collapse of cholera.]

In a great many cases a single treatment in this way by an efficient healer will break up a commencing fever, or arrest the progress of one which is more advanced. It will also relieve cases of diarrhoea and cholera morbus, menstrual disorders, hysteria and melancholy.

Following this operation, the hands should be placed on the region of Health on the shoulder blades, the perfect vitality of which has already been explained, and a gentle or vigorous percussion applied over the whole upper part of the back, from the neck ten or twelve inches down.

A gently stimulant or mild capsicum plaster, six or eight by ten or twelve inches, according to the size of the person, may be placed across the shoulders, to maintain the impression thus produced and left upon the patient for a few hours.

If any particular remedy is plainly and positively indicated, it may be applied upon the skin as an embrocation under the plaster, in the form of a tincture or strong decoction, and its constitutional effects produced without introducing it in the stomach. The most sensitive locality for the external application of medicines is on the median line between the sternum (breast bone) and umbilicus.

As the physician should combat not only the prostration of the vital powers generally, but the special debility, disorder and disease of each organ, he will go to the basis of the vital forces in the spinal column to re-inforce the dilapidated energies. The vital forces and positive elements are in the posterior half of the brain and the body — the sensitive and negative in the anterior.

This is the general plan of the animal kingdom. In the torpedo, for example, the spinal side of the body is positive and the abdominal surface negative. The current is from the spinal toward the abdominal surface.

The commanding importance of the spinal region has not escaped the observation of the most enlightened practitioners of electro-therapeutics. Dr. Beard says "in the employment of general Faradization particular attention should be given to the spine, even at the expense of neglecting other portions of the body;" and he recognizes the upper dorsal region as the most important portion of the spine.

The seats of the various energies which may be treated in this way are arranged in a very simple and intelligible way along the spine.

The summit of the spinal column is the region that invigorates the brain, and may therefore be called CEPHALIC. The stimulation of that region gives strength of will, dignity of character, self-reliance and all that belongs to conscious strength of character.

The three upper ^{dors} and four lower cervical vertebræ are the location of the channels of the power which invigorates the brain and the entire character. The elevation of this part in a proud, manly, erect attitude expresses the strength of the character, and its depression in a drooping attitude characterizes humility, timidity, feebleness and disease. There may, however, be a large amount of the coarser energies from the lower part of the spine when the nobler energies of this region are defective, as we see in misers and men of bad, coarse character, whose shoulders droop while the back projects. It is from this region that the nerves proceed which supply the arms by which man exercises his intelligent vigor and enforces his authority. The arms are physiologically associated with the occipital organs, near the median line, in which are situated the commanding and ambitious faculties. The capacity of the cephalic region to sustain the brain power makes it important, not only to success in life, but in overcoming the irresolute feebleness of ill health and prostration of severe diseases. Hence, when the patient is failing in fortitude, stability, self-control,

power of attention and self-reliance, this is the region to be roused, while we should disperse from the hypochondriac regions — the margin of the ribs, in which the enfeebling, depressing elements are seated.

I do not mean by these remarks that the power of the spine overrules that of the brain, but that it is a co-operative instrument, as the entire body, by the laws of Sarcognomy, responds to the entire brain in sympathetic co-operation. Each portion of the body co-operates with and strengthens the portion of the brain with which it is in sympathy. As the eye is the necessary instrument of the perceptive organs, and the muscles the necessary instrument of combativeness, it is obvious that the loss or decay of these instruments would diminish the perceptive and the combative powers.

The upper region of the spinal cord, which I designate as CEPHALIC, is by far the most important, as it is also the largest portion. Even the great muscular power of the lower limbs, sustained by an enlargement of the cord at the beginning of the lumbar regions does not require so large a developement. The posterior or sensory roots of the spinal nerves show a more marked predominance over the anterior or motor in the cephalic region, corresponding to the refined sensibility of the upper part of the body.

The cephalic region embraces the five lower cervical and three superior dorsal nerves, which hold under their jurisdiction the arms, shoulders and upper part of the chest. By these muscles are executed all the movements of the arms, hands and shoulders, while they erect the head as well as the shoulders, and produce all the commanding dignity of human attitudes. The region of the body to which the nerves of the cephalic region are distributed may be called the cephalic region or zone — the region which sympathizes with the brain, and sustains its functions. This I state, not from anatomical inferences or theories, but from experimental facts — the production of similar conditions by the brain and by the body.

The largest nervous emission from the cephalic region is the *brachial plexus*, devoted to the arms, formed from the

fifth, sixth, seventh and eighth cervical nerves, and first dorsal. The anterior branches of these nerves form the brachial plexus, and the posterior go to the muscles and integuments of the lower part of the neck, corresponding externally with the cephalic region.

(Note — In addition to the nerves of the arm, the brachial plexus and its spinal roots give off nerves for the upper thoracic region — the anterior and posterior thoracic, the supra-scapular, sub-scapular and superior muscular, and supply the major and minor pectoralis at the lateral front of the chest, the serratus magnus on its lateral surface, and in the neck and shoulder supply the longus colli, complexus, spinatⁱs cervicis, multifidus spinæ, scaleni, rhomboidei, supra and infra spinatus, shoulder joint, teres major, subscapularis, subclavius, levator anguli scapulæ — and latissimus dorsi at the back of the chest. There are also two large nerves from the fourth cervical (acromialis and clavicularis), which pass to the surface of the front of the chest, between the sternum and acromion process. From the lower part of the cephalic region — the first, second and third dorsal nerves — proceed the *intercosto-humeral* nerves, which supply the posterior inner part of the arm, the lower part of the scapula, and the surface in the axilla. This location corresponds closely in its character with the cephalic region at the spine. The upper dorsal nerves in their anterior or intercostal distribution, correspond with the course of the ribs, and therefore relate to the upper part of the chest — the third and fourth supplying the mammary gland. Hence the region above the mammary gland may be properly included in the cephalic zone, with which it is also identified by its functional sympathies with the highest elements of humanity, connected with the upper portion of the brain.)

Another very important relation of the cephalic region, illustrating its commanding position, is found in the *Phrenic* nerve, commonly regarded merely as the nerve of the diaphragm, but really one of the most important and extensively related nerves, comparable to the pneumogastric and sympathetic, and similar to the sympathetic in some of its functions, but going more freely to the diaphragm than the heart.

The phrenic originates from the third, fourth and fifth cervical, also communicating with the vertebral ganglion, and thus associates the cephalic region with its very extensive and important functions. Through its branches to the lower vena cava, pericardium and *right auricle*, it has an important influence on the heart, assisting its action.

Through its distribution to the diaphragm it becomes an important vital nerve, and corresponds in its position as an inspiratory nerve for the body, with the spiritual inspiratory function of the brain. As the sensitive nerve of the pleura costalis (the sensi-

bility of which is very acute in pleurisy) it represents a region that sympathizes with the upper cerebral surface and connects also with pulmonic regions of the spine.

Finally, by its distribution to the peritoneum, liver, small intestines and supra-renal capsules, it brings these regions into close relation with the brain and lungs, such as we see illustrated in the coughs and convulsions produced by the intestinal irritation of worms.

This latter distribution is an important fact in Sarcognomy, as without it there would be no explanation of the functions I have found at the abdominal surface (the regions of Respiration and emotional expression) for the entire brain. But even this anatomical illustration is hardly an adequate explanation of my discovery which requires some additional knowledge for its full comprehension.

The cephalic region of the spine is closely connected with the vertebral ganglia (lying at the junction of the cervical and dorsal vertebræ, or between the last cervical vertebra and the first rib. They are under the immediate control of the cephalic region, as all the ganglia communicate with and are controlled by the adjacent regions of the cord. Branches may be traced from the 7th and 8th cervical nerves to this ganglion. The vertebral ganglia are the governors of the entire circulation of the posterior half of the brain, and its downward extension, the spinal cord. They lie on the vertebral arteries which give the supply of the posterior part of the brain and the spinal cord, and send a plexus along the course of these arteries, which accompanies their ramifications (after forming the basilar artery) with minute branches, which finally connect with the analogous branches coming from the carotid plexus along the carotid arteries and branches for the anterior half of the brain.

When the operator's hand is placed on the cephalic region, it covers the subclavian artery (for the brain and the arm) adjacent to the last cervical vertebra, the vertebral arteries which supply the brain and spine, and the vertebral ganglia which not only control the circulation of the energetic portion of the nervous system, but contribute to sustain the action of the heart.

The superior regions of the brain sympathize with the superior

region of the chest, as is shown by pathology (and as I have often felt in my own person) in accordance with which fact the vertebral ganglia (controlled by the cephalic region) send some branches down to unite in the pulmonary plexus (which is supplied from the third and fourth ganglia in the dorsal region) with the pneumogastric, the sensitive nerve of the lungs and heart.

It also cooperates with nerves from the cephalic region, viz : the seventh and eighth cervical and first dorsal, in forming the axillary or brachial plexus, which controls the arms and shoulders. Moreover it sends down one of the principal nerves of the heart. Probably this nervous connection may explain the pain felt in the left arm as far down as the elbow in cases of cardiac disease.

From the first three dorsal vertebræ proceed the anterior spinal nerves, called intercosto-humeral, which supply the inner and posterior surfaces of the arm, the axillary region and a portion of the upper frontal surface of the chest. These surfaces according to Sarcognomy correspond with the region of Dignity and authority in the brain, and a portion of the emotional and intellectual region sympathizes with the frontal distribution of the first dorsal : the first three nerves are therefore strictly cephalic in their distribution.

Thus we see the cephalic region is a great centre of power sustaining through its subordinate ganglionic nerves the posterior cerebral lobes, cerebellum and spinal cord, while it controls the upper limbs, sustains the action of the heart, and contributes to the organic life of the summit of the lungs, which sympathizes with the upper part of the brain. At the same time the posterior nerves from the cephalic region of the cord supply the integuments of the upper part of the back which Sarcognomy shows to sympathize with the upper occipital region of the brain. In short we have here the vital knot, the combination of the executive power of the arms as well as the cerebro spinal and cardiac power, with the pulmonic region, which is at once the sympathetic support of the brain and the inlet of life conditions to the body — spirit life, blood life, action and inspiration, being here inextricably combined. Hence in exciting this region in the impressible, they feel a great sense of additional strength and manhood, or force of character,

for it commands the entire forces of the body. Any one who wishes to realize its influence, if not impressible by the hand, may realize it by placing upon it a gently stimulating plaster, and if the plaster should also extend down as far as the sixth dorsal vertebra, the stimulation of the lungs and heart will greatly increase the effect and enhance the capacities for social or oratorical exertion.

In looking over the experience of electric therapeutists I cannot but wonder that they should have so generally failed to recognize the local influences revealed by Sarcognomy, when they are clearly indicated by the history of diseases.

The cephalic region of the cord however has not *entirely* escaped observation. Dr. Rockwell in Lectures on Electricity says "the *back part of the head and upper portion of the spine* (cilio spinal centre) will usually bear powerful applications; and it is an interesting and important fact that applications to this centre will produce far *greater tonic effects* than when the pole is applied to any other one portion of the body." No doubt much of his success in electric treatment was due to his discovery of this fact. Dr. Rockwell is a stronger advocate of Faradization than the majority, and superficial Faradic currents might be used with great benefit on the two regions he mentions.,

(Note — An additional illustration of the character of the cephalic region of the body may be found in the muscles which it contains. The trapezius, rhomboideus major and minor, upper serratus, splenius colli, semi-spinales colli and dorsi, spinalis cervicis, upper interspinale and multifidus spinæ all contribute to maintain the firm, erect attitude of head and shoulders, which is pathognomonic of strong character and sustained energy. These are adjacent to the spinal cephalic region. The muscles further off, controlled from the cephalic spine, in the shoulders and arms, with the serratus magnus and pectoralis, on the chest are the muscles of intelligent action and expression, by which mainly the conceptions and purposes of the brain are carried out, while the inspiration that vitalizes the brain is obtained through the fifth cervical and the upper intercostal nerves and muscles, aided by the upper serratus, serratus magnus and upper levatores costarum)

A knowledge of the character of the cephalic region may be of great value in diseases which, like typhus, affect the brain. Dr. Gerhard, of Philadelphia, discovered the value of the cephalic region, in the treatment of typhus fever.

" Scarified or dry cups, applied to the nuchæ or along the

spine, between the shoulders, have been found of great efficacy in removing or diminishing the suffusion of the eyes, the injection of the face, the headache, the delirium and other symptoms. They constitute in nearly all the cases a part of the treatment pursued by Dr. Gerhard at Philadelphia in 1836. Speaking generally of dry cups, he says "Applied in considerable numbers and left upon the nape of the neck and between the shoulders for twenty minutes or half an hour they always seemed to me a more powerful in nervous functional derangement, not attended with inflammation than scarified cups. I have used them largely in the treatment of the apoplectic symptoms of malignant intermittent with the best effects, and resort to them with confidence as one of *the most powerful means* of controlling discordant nervous action."

(Bartlett on *Typhoid and Typhus*.)

Dr. Beard by his experience in electrical treatment discovered the great importance and controlling power of the upper dorsal region of which he says (page 391) "There is no other single place on the surface of the body where the electrical influence can be communicated to so many important nerves as at the cilio-spinal center." "This application is a very important factor in general Faradization, and will achieve decided tonic effects on the system even when no other portion of the body is touched by the current." The anatomical reasons which he gives, however are entirely inadequate to explain its importance.

The stimulation of organs by nervauric influence is not limited to any exact lines but is always diffusive. Hence I shall not assign any exact boundaries to the localities to be acted on, but allow them to overlap. I speak of the second and third dorsal vertebræ in the cephalic group, although their adjacent ganglia are tributary to the upper portion of the lungs. The second and third dorsal spinal nerves supply the posterior aspect of the arm, and inner aspect of arm and fore-arm, which associates them practically with the brachial plexus that springs from the cephalic region. The region these two nerves supply corresponds with the posterior lobes of the brain along the median line and turning in between the hemispheres.

There is another curious fact, illustrating the cephalic influence of the upper part of the spinal cord, viz., that the second dorsal nerve originates the expansion of the pupil of the eye. Yet such is the diffusive tendency of impressions on the nervous system that this influence may be excited any where from the first cervical to the 6th dorsal nerve, hence this space has been called the *cilio-spinal region*. But exact experiment has shown that the second dorsal nerve is the sole seat of this spinal power. It is however exercised or transmitted through the sympathetic ganglia and nerves of the neck, the section of which deprives the pupil of the power of dilation by cutting off communication with the cord at the second dorsal nerve.

(Note — Why there should be such a control of the iris at the second dorsal nerve is a mystery, but when we find that it is identified with the brachial region which corresponds to the occipital brain on the median line this gives us a clue, for the tendency of organs on the median line is expansive. The coinciding region of these median organs is at the lateral aspect of the parietal bone, where Prof. Ferrier's experiments on pigeons indicated a close connection with vision.)

The expansive influence of the cephalic region upon the pupil corresponds with my observation that the superior portion of the brain tends to the expansion and the inferior to the contraction of the pupil.

Onimus and Legros have ascertained by their electric investigations the value of the cephalic and upper dorsal region as to its controlling influence in the head, not knowing the neurological relations of the parts but guided by the cilio-spinal phenomena. "In peripheric lesions (they say) it is advantageous to electrize only the nervous centres." "Hence to *act on the circulation of the head* and especially of the eyes it is preferable to electrize the cilio-spinal center, rather than to place the electrodes directly on the face or near the eyes," which is very true, as applications on the face would be rather injurious to the cerebral circulation.

The upper half of the dorsal region of the spinal column may be regarded as its thoracic portion and the lower half as abdominal. Hence in treating affections of the lungs and heart, we act upon the upper half, reaching the nerves emitted at the first six vertebræ. If the first three are accessory to cephalic action, they

are none the less pulmonic, as the upper pulmonic region is directly tributary to the brain by sympathy and correspondence.

The application of the hand on the upper dorsal region between the shoulder blades, produces a wholesome, invigorating effect on the lungs, and a similar effect is produced by any other stimulating application. Anatomy illustrates the relation of this region to the lungs through the blood vessels. The aorta from the third to the sixth dorsal vertebræ sends off the bronchial arteries, which are the arteries of the bronchial region and the lungs. The posterior pulmonary plexus and the root of the lungs through which they are supplied with air are on the level of the three upper dorsal vertebræ. To speak exactly the bifurcation of the trachea is opposite the third and fourth dorsal vertebræ.

The heart, too, is invigorated from this region, and we cannot entirely isolate the cardiac and pulmonic influences. The five upper ganglia in the dorsal region send branches along the intercostal arteries to the aorta, where they unite with the nerves that sustain the cardiac power.

Hence diseases in this locality affect the heart. Sometimes the symptoms of an acute affection of the heart have manifested themselves, when the irritation was seated in the dorsal region. M. Serres relates a case of meningeal inflammation and *ramollissement* of the cord, in which the heart's action and impulse were of such a nature that the disease was pronounced to be dilation with hypertrophy of the left side of the heart, which notwithstanding proved to be perfectly sound.

Below the first dorsal nerve (which goes to the arm) the next seven spinal nerves, going anteriorly supply the muscles and integuments attached to the ribs, and thus although they do not supply the lungs, they are associated therewith in action, giving inspiratory power to the intercostal muscles, and sensibility to the chest. The interior and exterior of the thorax are thus connected with the upper region of the cord, which may be strictly called thoracic, as it governs the thorax both internally and externally, and the posterior dorsal nerves supply the muscles and integument of the back — the upper half of them supplying the thoracic region.

As we find the maximum *excitability* (which is intermediate between power and sensibility — between impression and reaction — on the lateral surface of the head and body, we are not surprised to discover that the corporeal region of Inspiration is on the lateral surface of the thorax (see map) behind the mammae, running down to the seventh rib and thus corresponding with the anterior distribution of the intercostal nerves and muscles, the agents of costal inspiration, and associates of the phrenic nerve in diaphragmatic inspiration. The costal inspiration is more cephalic and spiritual in its associations with the brain, and diaphragmatic inspiration which belongs to a lower position on the head and body is associated with the basilar region and impulsive energies and passions.

According to Drs. Griffin, when the dorsal region exhibits tenderness, we find pains about the chest or in the side, weight and constriction of the chest, cough and fits of syncope, sense of sinking, loss of appetite, gastrodynia, pain in the region of the liver, and hiccup." — all of which is explained by the functions of the dorsal region.

If physicians had been accustomed to report the pathological effects of irritation of the spinal cord, we should have had a fine illustration of its functions.

Dr. Robert Little, in the *Southern Medical and Surgical Journal*, described the effect of spinal irritation as follows: " Irritation of the cervical division is indicated by pains in the face, temples and scalp, accompanied frequently by rigidity of the muscles of the jaw, when confined to the superior part. When the irritation is lower down, there is pain in the region of the clavicle, scapula and chest, extending along the arm, giving rise to great *lassitude*, sighing, spasmodic twitchings of the muscles etc. When the dorsal division is affected, we have in addition to a few of the foregoing, *stricture across the chest, difficult breathing, palpitation of the heart, angina pectoris*, darting pains in the intercostal muscles, edges of the ribs and the *epigastrium*. Lower down still in the dorsal division pains in the *stomach and abdomen* are felt. In addition to these, a burning sensation in the sternum and ensiform cartilage is said to be always present in decided cases of irritation

of the dorsal nerves. When the lumbar and sacral division are in a state of irritation we have pains of an acute lancinating character, soreness in the skin and muscles over the genital organs, spasmodic twitchings along the course of the crural nerves, together with an unsteady carriage in walking, the patient having no confidence in his ability to retain an erect position, and exhibiting the reeling appearance of a drunken man." He ascribes also to the superior spinal nerves "throbbing of the carotid and temporal arteries, acute pains in the head, violent palpitation and painful sensation of the heart, and a feeling of inability to expel the air from the lungs."

Thus it is anatomically and neurologically certain that the upper half of the dorsal region is thoracic, and is the region on which to treat all thoracic affections.

The thoracic region has widely different characteristics in its upper and lower regions. The lower portion of the chest, brought into play by the diaphragm, is associated with vigorous active life, and is most readily brought into play by the active exertion of the lower limbs. Its tendencies in disease are chiefly inflammatory. The upper portion of the lungs is the part used in quiet sedentary occupations, and is therefore more nearly associated with the intellectual and moral faculties. It is the chief location of consumption, a disease arising from imperfect physical development and blood supply. The superior portion of the chest is associated with the delicate refined sentiments which are antagonistic to animal force. The organ of Mortality or extatic trance, belonging to the upper surface of the brain, has its correspondence on the upper surface of the chest, above the nipple. Hence diseases in the upper portion of the lungs tend strongly to death; and this was the cause of the invariably fatal character of pulmonary consumption until within the last forty years more correct ideas of its treatment have been slowly gaining ground against dogmatic opposition. Pneumonia, belonging chiefly to the lower or more vitally energetic portion of the lungs, would never have been considered a very dangerous disease but, for the absurd and injurious methods of its treatment. But pneumonia too becomes a very dan-

gerous disease when it seizes the upper portion of the lungs. Prof. Boling says that pneumonia, "commencing at the apex of the lung, is in proportion to the number of cases the most frequently fatal form of the disease." He had met with about six cases of this affection — they all proved fatal — the deaths occurring from less extensive alteration than usual. Prof. Eberle used to speak of suddenly fatal cases of relapsing pneumonia from congestion of the superior portion of the lungs, with so little disturbance that they had what he called a "morbidly natural pulse." These fatal upper-lung cases of pneumonia are accompanied by a *persistent* mucous or crepitant rhoncus, that should warn us of the danger, which is also found in fatal consumptive conditions.

Costal respiration, which develops the upper part of the chest, the seat of refined sentiments, is more characteristic of women, as diaphragmatic respiration which develops more vital impulse is characteristic of men. Hence women have smaller waists, and are more willing to undergo tight lacing.

The upper part of the chest, corresponding with the upper surface of the brain, cooperates in determining the vital forces upwards or toward the head. The upper part of the chest, therefore, is the region of cephalic tendencies, and there are a great number of pathological facts that illustrate this proposition, which I may present when I undertake a full exposition of Sarcognomy.

A striking illustration of this sympathy is afforded by cases of sunstroke, which are supposed to be simply affections of the brain. In three fatal cases of sunstroke, which occurred in the Sixty-eighth regiment, at Madras, India, autopsies were made by Surgeon Russell, who found in all alike, no material disorder in the brain, "but, in all three, the lungs were congested even to blackness, through their entire extent."

In a violent outbreak of typhus fever among the British troops in Spain, as reported by Surgeon Bacot, the patients came to the hospital very much depressed, sad and melancholy — "giddiness of the head was a frequent complaint, and *deep and constant sighing was a universal symptom.*" This sighing inspiration is an effect of the upper region of the brain, especially under depressing

influences — a common effect of the amiable emotions which elevate the chest and the feeling of depression which acts on the diaphragm anteriorly.

Dr. Bartlett says "the morbid alterations which are found within the cavity of the chest seem to be more constant and more important in typhus than in typhoid fever. The lungs were more or less changed from their healthy condition in all the cases reported by Dr. Gerhard. This change generally consisted in a somewhat peculiar condensation of a portion of one or both lungs.

* * * Of forty-three cases examined by Dr. Reid, there was more or less lesion of the lungs in all." It appears from a careful comparison, that extensive engorgement and congestion of the lungs were more frequently associated with those cases in which there was increased serous effusion within the cranium, than with those where this condition did not exist. Nearly all these patients exhibited more or less prominent cerebral symptoms. Dr. John Cheyne, who made a number of dissections in Dublin, said "our expectations were never disappointed as to the state of the brain.

* * * The vessels of the head were turgid; there was increased vascularity of the brain, especially on its surface."

Thus it appears that the state of the cephalic circulation, whether hyperemic, irritated or congested, is responded to by similar conditions in the lungs, and I have often personally experienced that a determination to the upper region of the brain, stimulating the amiable and intellectual faculties, is produced by the partial hyperemia of the lungs in a cold affecting their upper portion.

The history of insanity furnishes another illustration of cephalic and pulmonic sympathy. The leading cause of death among the insane, according to Dr. Thurnam's tables, is *disease of the respiratory organs*; the fatality of which excels that of epidemic, endemic and contagious diseases, apoplexy, paralysis and epilepsy combined. Dr. Fischel, of Prague, reported that in that city seven per cent of the deaths of the insane were caused by gangrene of the lungs.

Dr. Vierordt, of Carlsruhe, in examining fifty-one cases of typhus fever, states that the lungs were never healthy. They

exhibited a wrinkling and dark red color of the bronchial membrane, with ademic and hypostatic congestion, carnification, hep- atization, and in two cases, gangrene.

An interesting anatomical illustration of this blending is observable in the location and action of the serratus posticus superior, which rises from the cephalic region and runs in the cephalic and pulmonic zones, to act as an inspiratory muscle. It proceeds from the sixth, seventh and eighth cervical, and first and second dorsal to the second, third, fourth and fifth ribs, beyond their angles, and therefore acts as inspiratory muscles for the upper part of the chest.

That the lower part of this thoracic region holds a close relation with the heart can easily be shown by experiment with the hand. Its effect is not exciting or agitating, but strengthening to the heart, and thereby rousing and invigorating to the whole constitution, but with rather less composure and tranquility than by the pulmonic and cephalic regions. Sedative applications to this region will diminish the activity of the heart. A galvanic current down the dorsal region will diminish its excitability and retard its pulsation, according to Althaus; the current he used was that of from forty to sixty cells.

The heart is not dependent on this region alone, for its chief ganglionic nerves come from the sympathetic ganglia in the neck, which are connected with the cervical region of the cord, and it is also influenced by the pneumogastric nerve (which serves to exercise a restraining power). Thus it seems that both cervical and upper dorsal regions sustain the heart — in other words it is associated closely with our whole vital brain force, through the ganglia which simultaneously sustain the brain and the heart, thus making the neck preeminently a vital region — a region that links the cere- bral with the corporal seat of life.

A similar close association occurs in the spine, in which the cephalic and thoracic regions are adjacent — the latter combining the pulmonic and cardiac influences in close association. The five or six upper dorsal ganglia forming a sort of plexus, supply filaments which run to the aorta and join the great mass of ganglionic nerves

that sustain the heart, the third and fourth ganglia supplying filaments to the posterior pulmonary plexus. The thoracic and abdominal regions divide the spine between them nearly equally, the lower ganglia being abdominal.

The ganglia and their nerves are the sources of the power that sustains the heart, and they have close associations with the cord, from the base of the cranium to the middle of the dorsal region. They are also the sustaining power of the pulmonic region, although the pneumogastric is the chief source of the pulmonary plexuses, which also receive branches from the vertebral ganglion.

(But whatever the anatomical arrangement, the fact that the hand applied about the sixth dorsal vertebra energizes the heart, is sufficient for therapeutic purposes.) Dr. Steiner, of Vienna, has in several cases succeeded in resuscitating animals whose hearts had ceased to beat, by applying the positive pole to a needle at the heart, and the negative to the seventh intercostal space. This was in accordance with Sarcognomy.

At the upper margin of the cephalic region the fifth cervical nerve sends off a branch to unite with the fourth in forming the phrenic, the great inspiratory nerve of the diaphragm, (and auxiliary nerve of the heart and abdominal viscera) which is thus brought into connection with the brain, associating the action of the brain with physical as well as spiritual inspiration — the association being completed by nerves from the vertebral ganglion to the phrenic, and branches from the seventh cervical, which go to the vertebral ganglion and also (according to Bell) generally supply filaments in company with the sixth to form the Phrenic. Thus we perceive how closely the functional life of the brain is associated with the transmission of both life and oxygen to the body. Let us look closely again at the distribution and relations of the phrenic nerve.

In the interior of the chest, the phrenic nerve not only supplies the pleura costalis (with some help from the pneumogastric in the internal lamina) but supplies the mediastinum or most interior region, which sympathizes with the interior and more spiritual

region of the brain, near the falx, between the hemispheres, the activity of which stimulates inspiratory action. Thus the most superior part of the cephalic region seems to associate with inspiration, and with the superior and interior regions of the brain, while its most inferior portion (according to the general laws of the nervous system) has an inferior function, as it sends off the first dorsal and last cervical nerves, by which the muscles and integuments of the hand are supplied. It is a beautiful illustration of the wise and ingenious plan of the human constitution that the cephalic power in the cord which is in relation to the high and interior regions of the brain — the channel of this higher influx of life, is also in relation with the inspiration which gives an influx of vital conditions to the body, making our compound life a possibility.

The phrenic nerve also participates in the cardiac power. — Opposite the third rib it sends branches to the pericardium. It also supplies the right auricle of the heart and inferior vena cava; and experiments on dogs and rabbits show that irritation of the phrenic puts the right auricle into contractile movement.

Thus we see how closely the brain power and cephalic region of the cord are associated with both circulation and respiration and in fact with all the viscera, for the phrenic and pneumogastric nerves, the former from the middle cervical region, and the latter from the medulla oblongata in the cranium, convey to the brain all the sensations of the abdominal as well as thoracic organs, and of their serous membranes, which are supplied by the phrenic. Thus we perceive a direct anatomical channel for the sympathies which we know to exist.

The brain belongs not to the locomotive or active, but to the visceral system, and it sympathizes with all the thoracic and abdominal viscera. Upon the lungs it depends for the vitalizing influence of red blood. Upon the abdominal organs it depends for the existence of the red blood, since they supply, through the thoracic duct, the digested material of the blood, and by their excretions they maintain its purity. Upon the kidneys it depends for the removal of narcotic and irritating elements.

The intercostal spinal nerves which are from the dorsal tract,

are combined with the ganglionic filaments in their distribution to the walls of the chest, and also to the diaphragm. (The latter distribution is not usually mentioned in text books of anatomy, and their description of the phrenic nerve is extremely defective.) Thus although the upper dorsal is the special pulmonic region, there is a respiratory influence through the whole dorsal tract, operating above through the intercostal or rib-lifting muscles, and below through the diaphragm and abdominal muscles, which latter are supplied from the lower dorsal region and constitute the apparatus of expiration. The pulmonic, cardiac, cephalic and abdominal influences of the dorsal region are so important as to make it a dangerous location for disease. The Cyclopedia of Practical Medicine says "it has been observed that the fatal termination is much more rapid when the dorsal region is the seat of disease."

Let us then understand that while the upper dorsal region is the pulmonic and cardiac tract, the entire dorsal region is a respiratory tract, acting above by the ribs, and below by the abdominal muscles and diaphragm. And although the lungs and heart should be treated directly on the upper dorsal region, a cough, which involves the irritation of the respiratory muscles, has its immediate seat in the lower dorsal region, which controls the expiratory coughing muscles, and they depend much upon the irritability of that part of the cord. Hence an embrocation or manipulation designed for the relief of a cough may be very properly applied on the lower dorsal region, for injuries or irritations of that region may produce a spinal irritability shown by coughing. In a case of fracture of the eleventh dorsal vertebra, and softening of that portion of the cord (reported by Brodie) a cough would be brought on by any slight change of position.

It is quite interesting to find that the physiology of the dorsal region of the cord has been well illustrated in the electric experiments of Onimus and Legros. In their forty-seventh experiment, the spinal cord of a dog was exposed at the third and fourth dorsal vertebræ, and divided. In electrizing the upper portion by a galvanic current, they state that the *respiration* became very deep, and the *blood pressure* in the carotid very feeble. In the superior

part of the divided cord an upper current increased the blood pressure as it stimulated the portion of the cord connected with the cervical ganglia.

On the lower part of the divided cord a current from the cut end downward raised the pressure higher than the current through the upper part. A Faradic current through this lower part produced at once a rapid elevation of the blood pressure and a considerable fall, as the excitability was exhausted, when the action of the heart suddenly ceased. This appears to be a fair demonstration of the intimate dependence of the lungs on the region above the fourth dorsal vertebræ and of the heart on the region just below.

In a case of dislocation between the sixth and seventh vertebræ reported by M. Carassus in the Gazette Medical it is stated that the pulse was feeble and frequent. The cord in this case was compressed by the sixth vertebra, and its posterior part at the junction was softened. There was complete paralyses below the injury. The mental faculties were clear, death ensued in twenty-four hours.

Injuries at the lower cervical vertebræ below the sixth cervical destroy all power either of inspiration or expiration, except by the diaphragm, controlled by the phrenic nerve, and by such assistance as may be given by the trapezius, serratus magnus anticus, and sterno-cleido-mastoid, in lifting the ribs—an assistance which is not very important and would not sustain life long.

The DIAPHRAGM is not entirely disconnected from the spinal system, as it may be excited from the sixth, seventh and eighth intercostal spaces, by the hand and by electric currents. At the sixth, seventh and eighth vertebra, electric or nervauric stimulation gives vigor to its action, but not the restless excitement which is produced at the lateral surface of the trunk. Its connection with the spine is through branches of the intercostal nerves, as described by Luschka, and indirectly through the ganglia and splanchnic nerves, and the solar plexus. The dorsal ganglia are the vasomotor control of the intercostal arteries, which anastomose with the phrenic arteries, and they have direct communication with the phrenic nerve, through the great splanchnic, and the *ganglion diaphragm-*

maticum, as well as a controlling influence on the diaphragm through the great splanchnic, solar plexus and *phrenic* plexus, the immediate agent of its organic life. The diaphragm, therefore, has a close relation to the spinal and ganglionic regions between the sixth and tenth vertebræ, and we may therefore recognize a *Phrenic Zone*, extending as low as the solar plexus.

The lower dorsal region has some other relations to the diaphragm as the latter cooperates with the expiratory abdominal muscles, when it is necessary to compress the abdominal viscera, but not the lungs, as in vomiting or defecation, or if we wish to speak while engaged in laborious efforts. The great solar plexus, connected with the lower dorsal region, originates superiorly the phrenic plexus which goes to the diaphragm and phrenic artery, and communicates with the phrenic nerve.

As the lower dorsal region contains the ganglia which emit the splanchnic nerves that pass down through the diaphragm and govern all the abdominal viscera, we perceive how abdominal irritations in any of the organs may disturb the lower dorsal region and become the cause of a cough or its aggravation, as is seen in a liver cough or stomach cough. Most generally, however, coughs begin in an irritation of the lungs, which is conveyed by their sensitive nerve, the pneumogastric, to the medulla oblongata within the cranium, and if the irritation be sufficient, it is propagated downwards to the lower dorsal region, and produces the convulsive expiration which is called a cough. But before reaching that region it starts the phrenic nerve in the middle of the cervical region and produces by it an act of inspiration by the diaphragm, and then in the upper dorsal region, it starts the intercostal muscles, lifting the ribs, and as the chest expands, the irritation reaches the lower dorsal region and the cough or sneeze explodes by means of the abdominal muscles.

Quieting anodynes, either by inhalation, by swallowing medicine, or by manipulation, diminish the irritability of the pneumogastric and the spine, and thus relieve the cough. As secretion generally diminishes irritability and soothes the surfaces, expectorant remedies are in that way beneficial.

The *diaphragm*, lying between the heart and the liver, (between the thoracic and abdominal cavities) we might anticipate that its spinal region would lie between the upper and lower dorsal regions, and experiment shows this to be the fact. The greatest energy is given to the diaphragm by manual or electrical stimulation at the sixth, seventh and eighth dorsal vertebræ. Continuing anteriorly along the sixth, seventh and eighth ribs, we trace the phrenic zone, and in accordance with the general law we find that phrenic excitability increases on that line toward the front. On each side, halfway to the front, we find the maximum excitability, and an electric current through the body at that location rouses the diaphragm more forcibly than at any other location — better, even, than through the phrenic nerve, in which it is impossible to localize the current. This lateral current goes directly to the diaphragm and its local nerves. Currents which combine this lateral stimulation with stimulation of the cord at the sixth, seventh and eighth dorsal, would give the most efficient rousing of the diaphragm possible for recovery from asphyxia. A Faradic current might be passed between the spine and the two localities mentioned, after they had been roused from torpor by an interrupted galvanic current.

These functional locations are different from the received ideas, which give undue prominence to the phrenic and ignore the spine. They are not, however, without anatomical support, as the diaphragm is not as commonly supposed dependent solely on the phrenic nerve. It receives many nervous filaments from the six lower intercostal nerves, the corresponding ganglia and other solar plexus.

It would appear singular to me if it were not so — if the inspiratory action of the diaphragm were dependent solely on a single remote nerve while the expiratory action with which it alternates, and with which it often cooperates, as in coughing, vomiting, defecating and struggling (in which the diaphragm and abdominal muscles balance each other) has an ample location in the spinal cord. The multiplex functions of the phrenic, as a nerve of sensation and of organic life at the heart and below the diaphragm, must diminish its importance as the special excitor of the diaphragm, and I think it important in the treatment of asphyxia to

bear in mind the locations I have mentioned as most potent for inspiration.

I find also, experimentally, a respiratory region on the surface of the abdomen corresponding with that on the face. Anatomical ideas gave little encouragement to such a location, but no matter what anatomy says, the nervauric experiment, which should be the guide in the science of life, locates a respiratory impulse on the abdomen, around the umbilicus, as if there were a close association between the influx of life by the umbilical cord and the influx of inspiration — the inflow and outflow of oxygenized blood and the inflow and outflow of the oxygenizing air.

The abdominal impulse of respiration, following the general law, has less energy than the lateral and posterior impulses, and would not be as efficient for recovery from asphyxia — nevertheless it may be serviceable in nervauric practice, especially to cooperate in the evolution of warmth, and also to assist in deepening respiration, for which I frequently use it.

It is not entirely destitute of anatomical foundation, as the phrenic sends branches to the region at which we find respiration on the abdomen, and it is reasonable to believe that excitation of its extreme filaments may rouse its functions as the diaphragmatic nerve.

Leaving the upper dorsal half as the thoracic region (for lungs and heart) we should presume that the lower half must maintain relations with the regions below the diaphragm; accordingly, we find that the spinal nerves of the lower half pass down over the ribs and distribute to the muscles and integuments of the abdominal walls, including the diaphragm, while the adjacent ganglia of the sympathetic system, sixth, seventh, eighth, ninth and tenth, send down through the diaphragm the splanchnic nerves, which form the solar plexus, controlling the abdominal viscera. The solar plexus comprises not only the ganglionic nerves but branches from the pneumogastric and phrenic, especially of the right side.

Hence we apply the hand on the lower dorsal region for the invigoration of liver, pancreas, stomach, bowels and kidneys. It is the most inferior of the dorsal ganglia (tenth, eleventh and

twelfth, or twelfth alone) which form the lesser splanchnic (ganglionic) nerve which supplies the kidneys (which are located at the bottom of the dorsal region) by forming the usual plexus.

We understand the power of the solar plexus, formed by branches from the lower dorsal ganglia, when we look to its extensive ramifications. It sends branches along the abdominal aorta and forms the subordinate controlling plexuses of the abdomen, viz., the phrenic, cæliac, gastric, hepatic, splenic, renal, supra renal, superior and inferior mesenteric and spermatic plexuses, which supply the stomach, liver, spleen, pancreas, duodenum, intestines, testes and ovaries.

At the last vertebra of the dorsal region we find the ganglionic origin of the nerves of the kidneys and the kidneys themselves at the junction of the dorsal and lumbar vertebræ.

Thus the anatomical structure directs us to the lower half of the dorsal region for the treatment of the abdominal viscera generally — the kidneys being reached at the lower, and the liver at the upper vertebræ of this tract, and the circulation being also modified through the lumbar region.

Experiments in vivisection illustrate the physiology of this region. After section of the splanchnic nerves, a gentle Faradic current applied to their peripheral end has caused increased action of the intestines. "Valentine found that the Galvanization of the superior thoracic ganglia revived the pulsation of the heart after it had ceased, and increased the frequency of the beats when already in action. Mild Galvanization of the splanchnic nerves that arise from the six lower dorsal, ganglia of the sympathetic increases, while strong Galvanization diminishes the peristaltic action."

It was formerly believed, and even supposed to be proved by experiments, that gastric digestion depends entirely on the pneumogastric nerve, although it is well known to be almost wholly a sensory nerve at its origin, and the digestive function has reappeared in the stomach after section of the pneumogastric, when time has been allowed to recover from the immediate effects of the injury. Moreover, the irritated secretions produced in the stomach by a poison, appeared the same when the pneumogastric nerves

had been divided as when they were whole. This was evidently under the control of the sympathetic or ganglionic nerves, which proceed from the lower dorsal ganglia to the solar plexus, and are combined with spinal filaments. Hence it is through that route we reach the stomach — the nerve tracts in which electric experiments demonstrate the control of intestinal movements.

In treating the lower section of the dorsal region for the viscera we influence also the regions supplied by its spinal nerves, viz: the muscles and integuments of the abdomen — the transverse oblique and rectus muscles, by which the abdominal viscera are kept in motion and their contents compressed, and by which the actions of coughing, vomiting and defecation are performed. Sir Benj. Brodie relates that in a case of injury of the spinal column at the sixth dorsal vertebra, the muscles of the abdomen were paralyzed and unable to cooperate in expiration ; hence coughing was impossible.

As the lower dorsal region for the abdomen supplies muscular power for its motion, so the upper dorsal region for the thorax, supplies power for its action by the intercostal inspiratory muscles, and also moves the pectoralis major.

From this review it is apparent that the upper portion of the spinal cord tends to sustain the growth of the head and chest, and to expand the lungs, while the lower portion developing the abdominal viscera, and the lower part of the body, tends also by expiration to contract the developement of the lungs and chest. In emotional character the thoracic region cooperates with the higher impulses and principles, and in growth it cooperates with the brain. Hence we draw the practical conclusion that increase of thoracic developement is of the greatest importance in hygienic and moral culture.

In the lumbar region, the ganglia go to supply the lumbar plexus of the spinal system and also to the aortic plexus, which controls important arteries.

The spinal lumbar plexus, formed by the lumbar nerves and the last dorsal, constitutes the chief motor power of the thighs, and

by its lowest nerve the lumbo-sacral exercises an important control over the reproductive organs. While its vascular and nervous connections bring it into relation with all the abdominal viscera below the stomach.

Thus it appears that the lumbar region has an important control of the inferior portion of the alimentary canal, and the abdominal region of the spinal column extends from the middle of the dorsal region to the sacrum.

This is illustrated by pathological and experimental facts. Brachet divided the spinal column of a dog between the third and fourth lumbar vertebræ. He kept him two days and fed him. Neither fæces nor urine was discharged — they accumulated in large quantity. He kept a young cat seven days after severing the spinal cord between the third and fourth lumbar vertebræ, and fed it as usual. The rectum and bladder became enormously distended, and a small portion only of feces and urine escaped. In the case of a man whose spinal column had been fractured by a fall from a high tree, the lower limbs, rectum and bladder were paralyzed and had to be relieved mechanically, while he had no feeling of the necessity for evacuation.

(Note — The relation of the spinal *lumbar plexus* formed by the first four lumbar nerves, lying from the second to the fourth lumbar vertebræ (and therefore accessible to the influence of the hand or electric current along a space of about five or six inches, beginning just below the inferior ribs) to the abdominal region in front of it, arises from the branches it gives to the integuments and muscles of the lower part of the trunk, and the ganglionic nerves and plexuses with which it connects, which control the organic life within the pelvis and bring it into sympathy with the lower limbs which depend on the lumbar and sacral regions.

The nerves of the lumbar plexus; in succession from above downward are —

1. The Ilio-hypogastric, or superior musculo-cutaneous.
2. Ilio-inguinal, or inferior musculo-cutaneous.
3. Genito-crural, or external pudic.
4. External cutaneous.
5. Anterior crural, or femoral.
6. Obturator.

In addition to these anterior nerves, the lumbar region emits a few posterior nerves of smaller size, diminishing as we descend. They supply the muscles that sustain the spinal column (*multifidus spinæ* and *inter spinales*) and the integuments of the sacral and gluteal regions. The integuments of the buttocks are supplied by the posterior branches of the upper lumbar nerves and the anterior branch of the first lumbar.

The *Ilio-hypogastric* and the *Ilio-inguinal* may be taken together, as they

arise from the first nerve and have proximate distributions. Sometimes the Ilio-hypogastric exists alone without its adjunct. Their names indicate their distribution — they pass over the ilium (hipbone) the ilio-hypostric going to the buttocks (the skin over the glutei muscles) and the hypogastric branch to the integuments of the hypogastric region (the lower part of the abdomen). The ilio-inguinal passes through the transversalis muscle of the abdomen, through the inguinal region and external abdominal ring to the integuments of the scrotum, the spermatic cord, the pubic and labial surfaces, and the upper, inner surface of the thighs. The ilio-hypogastric also gives muscular filaments to the lower part of the abdominal muscles and to the iliocostalis, situated anteriorly, which lifts the thigh or lowers the trunk.

The *genito-crural* or external pudic, and the *external cutaneous* arise from the second nerve. The genito crural, going to the genital organs and thigh, rises from the second nerve, and its connection with the first. Its genital branch supplies the spermatic cord, the cremaster muscle and investments of the testis, and in the female the round ligament and external labium. It supplies also the integument of the groin and the lower border of two of the abdominal muscles. This teaches us the association of the inguinal region (the groin) with the sexual functions. The crural branches of the genito crural, passing down with the external iliac artery, go to the integument of the front of the thigh, half way to the knee. Thus we perceive through the ilio-inguinal and genito-crural the upper anterior and inner surface of the thigh is associated with the sexual functions and the entire group of sexual and upper crural functions mentioned, concentrates at the space of the three upper lumbar vertebræ, at which also is located the sensibility of the buttocks.

The *external cutaneous*, proceeding from the second lumbar and its connection with the third, has a distinct distribution from the last named. It passes out under Poupart's ligament in front of the ilium, to distribute along the outer and exterior posterior aspect of the thigh, as far as the knee, passing over the tensor vaginæ and vastus externus muscles.

The chief nerve of the lumbar plexus is the *anterior crural* or femoral nerve, formed by branches from the second, third and fourth. It is the chief muscular nerve of the thigh, for the muscles and integuments of its anterior and inner side and also sends down a long branch for the anterior and inner surface of the leg and dorsum of the foot, and a branch to the femoral artery, which follows it down the thigh. The crural forms five branches, the special distributions of which would interest only the student of anatomy. (Its middle cutaneous branch supplies the integuments along the inner and frontal surface of the thigh as far as the knee — mingling at its upper part with the genito crural. Its internal cutaneous branch supplies the inner surface of the thigh to the knee, and after supplying the surface of the knee joint, sends some filaments down the inner surface of the leg. By the long saphenous branch, it supplies the inside of the leg, ankle and foot to the great toe. At the knee it supplies the frontal surface and below supplies the front and inner side of the leg. The muscular branches supply all the muscles of the front of the thigh, except the tensor vaginæ and pectineus. There are also articular branches that supply the knee joint.)

From this anatomical review it appears that the sexual region has some association with the upper lumbar location, and that the functions become more purely muscular as we descend, until we reach the last lumbar nerve, where sexual functions reappear and continue into the sacral region.

The *obturator* nerve, formed by the third and fourth, is much smaller than the crural and belongs chiefly to the adductor muscles which bring the thighs together. (It supplies the adductor longus, magnus and brevis, the pectineus and gracilis. It supplies, also, filaments to the femoral artery and the hip joint and sends a branch, with the long saphenous, to the upper inner surface of the leg.)

These distributions show that the lumbar plexus gives the nerve-power for the muscles and integuments of the thigh, with only a slight influence on the abdominal muscles at their lower margin, from the nerves nearest the dorsal region, which have some connection with the sexual integuments and functions. There is, however, in the lumbar region the vascular nerve-power of the whole alimentary canal, and when we operate on the lumbar region we influence all the abdominal viscera. We know this experimentally, and when we look for the anatomical reasons they are very apparent. The lumbar region sends out four or five lumbar arteries at each side which curve around the vertebræ and supply the walls of the abdomen, as the intercostal arteries from the dorsal region supply the walls of the chest. The lumbar arteries also supply the adjacent portion of the back and spinal column.

The entire vascular circulating power of the abdomen is adjacent to the lumbar vertebræ. The iliac arteries for the lower limbs and pelvis bifurcate opposite the fourth lumbar vertebra, and from that locality to the upper end of the lumbar vertebræ we find, first, the cæliac plexus and artery supplying the stomach, liver and spleen, by its three branches, the superior mesenteric plexus and artery supplying the small intestines and half the colon, the inferior mesenteric plexus and artery supplying the remainder of the colon and the rectum, and between the two mesenteric arteries, the spermatic.

The lumbar ganglia send branches to the aortic plexus (a continuation of the solar) which originates the inferior mesenteric and part of spermatic and terminates in the hypogastric, to which the lumbar ganglia also send branches. The hypogastric is especially the plexus of the sexual organs.

Hence although the nerve power of the abdomen connects with the lower dorsal region, the lumbar region is equally impor-

tant, as influences applied to the lumbar region affect everything from the diaphragm to the end of the rectum (the diaphragm included), through the arteries, and the ganglia and plexuses which control the circulation and organic life of all the abdominal organs. Moreover the organs themselves are opposite the lumbar region, the stomach being opposite the first two lumbar vertebræ, the duodenum opposite the third, and the mesentery and umbilicus opposite the fourth. On the same level we find the mesenteric glands tributary to nutrition, and the receptaculum chyli adjacent to the second lumbar. The liver alone has a higher location, being opposite the last two dorsal vertebræ. Hence we reach the liver, stomach, spleen and pancreas., at the junction of the dorsal and lumbar vertebræ, and hold the nutrient absorption between our hands when one is applied over the umbilicus and the other at the two upper lumbar vertebræ. As the lumbar region contains the chief motor power of the lower limbs, there must be a close connection of the bowels and the muscles of the thigh, which is evinced in the tendency of sedentary pursuits to promote constipation, and the prompt effect of walking in renewing a diarrhea or cholera which has been arrested, and which can be kept in check only by lying down.

The lumbo-sacral, much the largest of the lumbar nerves, comes from the fifth nerve and a branch of the fourth. It enters the pelvis and, joining the first sacral nerve, it becomes a part of the sacral plexus, which is thus constituted by the last two lumbar and four sacral nerves. The lumbo-sacral, being an important nerve, is probably a chief source of the sexual energy coming from the sacral plexus. Near the lumbo-sacral nerve we find the internal iliac artery, which supplies the sexual organs, by pubic, pudic, uterine, vaginal, vesical and hemorrhoidal branches.

The third and fourth sacral nerves, by their anterior branches, combine with the adjacent ganglionic nerves, and go to the hypogastric plexus of the sympathetic system, which controls the sexual functions.

As my external nervauric experiments showed the junction of the lumbar vertebræ and sacrum to be the chief seat of the sexual

function, it is interesting to observe that the sexual or sacral plexus derives its nerves above and below the lumbo-sacral junction (the lumbar nerves above this point have a connection with the sexual apparatus, the external pudic or genito-crural arising from the second lumbar nerve), and that anatomy evidently indicates the lumbo-sacral region as the chief source of the sexual functions, the derangements of which, it is well known, are commonly manifested by pain or tenderness at the lumbo-sacral junction.

Longet and Breschet regard the lumbar portion of the spinal cord as the nervous centre of control for uterine action, and Budge found that by Faradization of a small ganglion adjacent to the fifth lumbar vertebra (which corresponds exactly to the external location found by my experiments) powerful contraction of the *vasa deferentia*, the bladder and the lower portion of the rectum are produced.

The lumbo-sacral sends off a branch to the glutei muscles, which have in consequence an association with the sexual function, and the lower lumbar ganglia, by their connection with the aortic and hypogastric plexuses, are in close relation to the sexual functions. Moreover, the lumbo-sacral junction is adjacent to the origin of the internal iliac artery, which supplies the whole pelvic viscera, and Faradization of the lower lumbar region acts most efficiently upon the bladder.

(Note — The sacral nerves give branches posteriorly to the sacro-lumbalis muscles and integuments of the nates and anal region. The lumbo-sacral and first four sacral nerves unite in forming the *sacral plexus*, which is rather a large nerve than a plexus. This plexus adjacent to the rectum, sends off two great nerves, the greater and lesser *sciatic nerves*. The *great sciatic*, the largest nerve in the body, is the continuation of the sacral plexus, deriving filaments from all the nerves that supply the plexus. The great sciatic supplies the obturator internus, the gluteus and the flexor muscles of the thigh, the adductor magnus, biceps and external rotators, and external surface of the ham, and sends down an important continuation, the popliteal or posterior tibial, which ends in the external and internal plantar, and becomes the chief nerve of the muscles and integuments of the leg and foot. It supplies the integuments of the leg, and the gastrocnemius, plantaris, popliteus and soleus muscles, also the tibialis posticus and long flexors, and the ankle and the sole of the foot. The plantar nerves supply the muscles of the foot.

The smaller sciatic nerve supplies the gluteus maximus and gracilis, and the integuments of the upper and posterior aspect of the thigh to the knee, and supplies some filaments to the flexor muscles.)

The *sacral plexus*, thus, by its downward extension, brings the leg and foot and posterior region of the thigh into close association with the pelvic viscera (especially the sexual organs), which are supplied by its anterior or internal branches. These internal branches are the hemorrhoidal, vesical, vaginal, uterine and pudic, going to the pelvis and perineum, their names indicating their destinations — the regions of the rectum, bladder and sexual organs. The vesical or bladder nerves supply filaments also to the vesiculae seminales, prostate gland and female urethra. The *pudic* nerve is the chief nerve of the genital organs, and comes chiefly from the third sacral.

The last lumbar, and the third and fourth sacral nerves send branches to the *hypogastric plexus*, which is the chief immediate control of the sexual apparatus. The external sexual locality therefore for Sarcognomy should be the lumbo-sacral junction and space extending above and below it, and the entire lumbar and sacral regions may be regarded as having sexual influences, through the surfaces at and around the sexual organs, and by connections with the hypogastric plexuses. Moreover, we find opposite the superior lumbar vertebræ the spermatic artery, a source of sexual power, as they supply the male testes and the female ovaries. (In birds, the kidneys and supra renal capsules lie in contact with the testes and the ovaries, and in man the testes in the embryonic condition are near the kidneys.)

The *hypogastric plexus* is formed from the sacral ganglia, aided by the third and fourth sacral spinal nerves, and the inferior mesenteric plexuses with which it connects. This is especially the sexual plexus, as it follows and controls the arterial supply of blood to the sexual organs.

It is difficult in such a commingling of nerves, where the sexual powers are reinforced from different sources — from the upper and lower lumbar and sacral regions, to fix upon its chief centre anatomically; but nervauric experiments and the principles of pathognomy direct us to the *lumbo-sacral location* as its commanding centre at the spine, as the sexual organs themselves are the immediate seat of the functional energy and excitement. In

this matter as in all other developements of Sarcognomy, I have followed experiment without regard to anatomy — only looking to it afterwards to see that it gave no incompatible facts. As to the lumbo-sacral junction, anatomy and physiological experiments confirm the nervauric discovery, showing the lumbo-sacral junction to be the sexual centre, although the distribution of nerves might have led to a different opinion.

Budge, who discovered the cilio-spinal centre (governing the iris) "has discovered a similar centre in that portion of the spinal cord which corresponds to the *fourth lumbar vertebra*. By Faradization of the same, powerful contractions of the *vasa deferentia*, the bladder, and the lower portion of the rectum are caused. The same effects are produced by stimulating a small ganglion, situated in the neighborhood of the *fifth lumbar vertebra*, and which receives branches from the third and fourth lumbar nerves. This ganglion Budge has called the *genito-spinal ganglion*."

Dr. Beard has also observed the influence of this region — he says — "If a strong current can be applied over the lower portion of the spine, between the upper borders of the *ossa innaminata*, a slight sensation is sometimes, though by no means uniformly, communicated to the rectum and the male genital apparatus, the penis and the testicles, through their spinal nerve supply."

Still more remarkable is the mingling of the locomotive and sexual powers in the spinal system. The lumbar region, chiefly for the thigh, and the sacral region, chiefly for the leg, are the sources of the sexual powers which thus arise from the midst of the greatest physical force. Hence, in their maturity, they develop or sustain the greatest energy, as we see in the contrast between the sound and the emasculated animal. The active life, which develops the greatest muscular energy also develops the greatest virile force, and hence population is not checked by the struggles of poverty so much as by the indolence of wealth.

The consociation of virility and the more turbulent energies corresponds with the usual course of nature. The season of sexual love among most animals is a season of restless energy and often of fierce combat. Among men it is the source not only

of social animation but of a great deal of turbulent lawlessness, jealousy and violence. The impetuous lover fights all rivals or obstacles, and sometimes when disappointed is ready to murder the woman who has rejected him and terminate his own life in his blind fury.

The sexual *power* which belongs to the spinal system, and which is an aggressive impulse, is distinct from the sexual sensibility and excitability which belong to the sexual organs, the influence of which tends to debility and exhaustion. Both belong to the lower end of the trunk, which antagonizes the head and summit of the chest according to the law of antagonism which is a fundamental principle of Biology according to my discoveries.

The lower limbs are especially antipodal to the brain, and in this they coincide with the excretions of the pelvis.

The foot is the most thoroughly anti-cephalic region, with the strongest tendency toward sleep or coma, and it is dependent upon the sacral plexus through its continuation, the great sciatic nerve. The sacral plexus is in close relation with the fecal and urinary matters which depress the nervous system. (The foot, under the influence of warmth, is effective in subduing the brain to sleep, and under the influence of fatigue from prolonged walking lowers all the cerebral powers.)

It would then seem probable that the pelvic distributions of nerves from the sacral plexus should have a similar anticephalic and lethargic character, and in fact we find in the pelvis the influences most hostile to cephalic integrity, tending to develope every form of hysteria, coma, paralysis, dementia and insanity.

The pelvic region receives the dead substance rejected from all the organs — devitalized, benumbing, debilitating. The solid waste of the body comes to the colon and rectum, the fluid waste comes by the kidneys and ureters to the bladder. The urea thus discharged is a narcotic element, torpefying to the brain, and we find in the pelvic region at the mons veneris a tendency to lethargy and coma similar to that which, on the head, appears under the jaw just above the larynx — a quality manifested not only in cerebral disorders, but in the manner, when largely developed, as was seen

in Mr. Webster, in whom notwithstanding his great developement of brain there was an extreme dullness and slowness of mental action, quite a contrast to that of Mr. Clay and Mr. Calhoun.

The explanation of this lethargic tendency at the mons veneris which quite surprised me when I discovered it is found in the narcotic character of the contents of the bladder behind the mons. It is a curious coincidence that the pubic region in question receives nerves (the ilio-scrotal branch) from the musculo-cutaneous, a branch of the first lumbar nerve which is in close proximity to the kidney from which the narcotic element takes its departure. The nerve is thus at each end in relation with narcotic impressions.

The lower pelvic region is the region of insanity and all forms of mental and cerebral degeneracy — that is — predominant irritations and excitements in that region produce all forms of cerebral derangement.

How nearly parallel these forms of cerebral disorder of pelvic origin are to the forms of mental degradation produced in connection with parts below the knee I will not discuss at present.

We have now hastily surveyed the spinal column, the repository of vital forces for the body, energized by an influx from the brain above. We perceive that from its summit, which cooperates with the brain, and summit of the lungs, to its lower end devoted to the legs, it is a collocation of unitized forces, acting on the different segments of the body by its voluntary spinal nerves, by the adjacent ganglia, and by the blood vessels those ganglia control, thus determining all activity and all growth.

The nervauric healer, with these principles impressed on his mind, will give more attention to the spinal region than to any other portion of the body.

The instant control of the spinal cord over all parts of the body renders it the channel of all sympathies, as we perceive when the cooling of one hand or foot has a cooling influence on the other, which was illustrated by the experiment of Dr. James J. Putnam on frogs, in which electrization of one foot produced contractions of the blood vessels of the web of the opposite foot, and by the experiment in which Brown Sequard showed that pinching

one arm caused a fall of temperature in the opposite arm through its effect on the cervical spine.

Correlation and combination of functions — Notwithstanding the distinct specification of the several regions of the spinal cord which has been shown, we cannot speak of these as distinctly separate and isolated regions, for every organ is in some way related to other portions of the cord than the region of its spinal control, and all inferior organs depend upon the immediate superior tract, through which communication is maintained with the brain and its continuations. Van Kempen found that a longitudinal section in the middle of the spinal cord along the fifth, sixth and seventh cervical vertebræ in dogs and rabbits produced a partial parlysis in the posterior limbs. (This experiment explains the galvo-tonic contractions of Remak who excited contractions in the anterior limbs by Galvanizing the posterior.)

Pathologists might be puzzled to account for paralysis in the lower limbs by affections in the cervical region, which this experiment would explain. It also adds to our knowledge of the commanding importance of the cephalic region in controlling everything below it.

Anatomy further illustrates the commingling of functions by the fact that spinal nerves are not limited in their connection to the spot where they appear to unite with the cord. Sensory nerves, when they unite with the cord run a little way up or down, or in both directions, and then cross to connect with the opposite side and carry out the general law of decussation. We know not how far the filaments pass before effecting their connection with some ganglion-like substance as their origin.

The heart not only responds to the upper dorsal region, but by its intimate dependence on the three cervical ganglia is brought into close relation with the brain and the cervical region of the cord, which associates with these ganglia. Moreover it has close relations with the third, fourth and fifth cervical nerves, the origin of the phrenic, by the phrenic distributions which supply the pericardium and the vena cava. The right phrenic goes to the lower vena cava and the adjacent portion of the right auricle, while the

lower vena cava and contiguous portion of the right auricle are supplied from the mixed phrenic and ganglionic nerves of the diaphragmatic plexus. Irritations of the phrenic nerve have produced contractions of the right auricle and diaphragm in dogs. It is clear, therefore, that both inspiration and circulation depend upon the cervical region, and are not so much centralized in the medulla oblongata as commonly supposed. The phrenic nerve communicates extensively with the branches of the middle and inferior cervical ganglia, the motor ganglia of the heart, and supplies the pericardium from its branches opposite the third rib, and also from its ramifications at the diaphragm. Moreover, the costal pleura (a portion of which is in the precordia over the heart) is supplied with its sensibility by the phrenic nerve, and thus connected with the middle cervical region. This region was intimately concerned, as well as the pericardium, in the Faradization by which Duchenne roused the action of the heart.

Again, the heart has connections with the lower dorsal region, for the solar plexus, originated by the splanchnic nerves coming from the sixth to the tenth dorsal ganglia, sends up branches through the diaphragm to the pericardium, by the diaphragmatic plexus.

The pulmonic and cardiac regions lie together in the cord, and the lungs are supplied largely by the pneumogastric nerve, which also supplies the pulmonary pleura, and is the great sensitive nerve of the thoracic cavity, the sensitive excitation of which is so subduing to the heart. Thus the heart is in relation to the pulmonic portion of the cord, and the origin of the pneumogastric at the medulla oblongata, not as the source of its power, but as the moderator of its action.

The upper thoracic region which thus plays upon the heart, subduing and softening its action and structure, is the corporeal seat of the soft and subduing emotions belonging to the upper surface of the brain (see map), the influence of which explains the effect of the tender emotions on the heart and the poetic conception of the broken heart, which is not destitute of a physiological basis.

Again, the cervical ganglia which control and sustain the

heart are at the same time the regulators of the brain, determining the amount of circulation in its anterior and posterior regions, and in the spinal cord, and as the brain demands a larger supply of blood, or the muscles demand more power, they start an increased cardiac energy to supply the demands created by the passions; but when the gentler emotions demand peace, their responsive region (the upper pulmonary) rouses the pneumogastric nerve, tranquillizing and relaxing the heart. The cephalic portion of the cord is also tributary to the heart, sending ganglionic filaments to the aorta.

The heart is closely related to the diaphragm, to which it is so closely situated, and their controlling regions in the brain and cord are so closely connected as to insure their cooperation. The same exertion or passion which accelerates the pulse also increases the action of the diaphragm.

The lack of definite limitation in the nerve supply of organs is apparent in all parts of the cord. The splanchnic nerves for the abdomen are connected no higher than the sixth dorsal ganglia, but their fibres may be traced up as high as the third, thus giving the abdominal region a nervous association with the lungs, heart and brain. In the sexual apparatus not only do we trace a definite anatomical connection (verified by nervauric experiment) between the sexual organs and the sacral region and lumbo-sacral junction, but we find an important influence in the lumbar region, as the genito-crural nerve arises from the second lumbar, and the lumbar ganglia go to form the lumbar, aortic and hypogastric plexuses, which control the pelvic viscera; and we observe that the spermatic arteries which supply the testes and ovaries originate at the head of the lumbar region, controlled by the spermatic plexus, which, derived chiefly from the renal, is thus connected with the lowest dorsal region, which originates the minor splanchnic nerve, the source of the renal plexuses. Hence we speak of the *genito-urinary* organs which are anatomically connected.

Thus in the intricate machinery of life there are so many forces brought to bear upon every organ, to stimulate, to modify or to arrest its action, that if we were not guided by a comprehensive

philosophy and an exact knowledge of the dominant laws, we might fall into serious mistakes.

In localizing the source of any function we locate the more important source of action and not an isolated concentration of the entire power. The nervauric physician should understand the relation of each organ to the entire nervous system.

(Note — Adjacent to the four upper dorsal vertebræ we find the recurrent laryngeal nerves — the left rising lower than the right, beneath the aortic arch, which ascend to the larynx, and are associated with the cervical ganglionic nerves. Hence, through this region comes the power of the voice, and the power of closing the larynx firmly, which comes into play when we exert our maximum strength. The voice is the most spiritual of all the physical powers of the body, and it originates in the cephalic region, (which I neglected to mention in its proper place) as it comes through the power of the spinal accessory nerve to the recurrent laryngeal, and the spinal accessory rises by several roots above the seventh cervical. In this region also, we have the descending branches of the pneumogastric, which join the cardiac plexus and give sensibility and sedative relaxing influences to the heart, as well as the anterior and posterior pulmonary plexuses, the latter joined by the nerves from the third and fourth dorsal ganglia, and going to supply the substance of the lungs, which are partly supplied from the cardiac as well as the pulmonary plexuses; in which we see a further illustration of the combination of cardiac and pulmonary energies, and their joint relation to the pneumogastric nerves, and the upper section of the cord.)

Finally it may be asked how do the facts of anatomy coincide with the localities of Sarcognomy? There must be a coincidence, as two classes of facts cannot be in collision. Sarcognomy does not affirm an isolation or separation of influences. Every location on the brain or body, though it may influence one function in a greater degree than others, is not limited thereby but exerts in various degrees modifying influences on other functions assisting the neighboring, and checking the most remote.

The nerve forces of the heart and lungs are inextricably mingled with each other, both in the ganglia and plexuses near the heart and in those along the spine, and even the lower dorsal region has relations to the heart. The heart and aorta confront the entire tract from the third to the tenth dorsal vertebra, the body of the heart occupying the space from the fifth to the tenth. Hence the nervauric influence of the hand may reach the heart at any point from the third to the tenth vertebra in consequence of its proximity, and that influence would be specially effective from the third to the sixth vertebra because it would reach the cardiac plex-

uses and ganglia, the immediate source of its action. The sixth vertebra may be considered the central locality for cardiac influence. Anteriorly, the heart corresponds to the space between the second and sixth ribs, and its lower end touches the wall of the chest two inches below the nipple and one inch nearer the median line. (The base of the sixth rib in front corresponds with the tenth dorsal vertebra). The heart may be reached in front, but the frontal influence is feeble compared to the dorsal, and the left side, which is the more muscular side of the heart, is toward the back. The intercostal nerves and arteries, which supply the chest around the heart, proceed from the space between the second and sixth dorsal vertebræ. The sympathetic connection of the sixth dorsal region with the brain shows that it is best adapted to sustain healthy and equable cardiac action. A calm and firm action of the heart is produced by the influence of the cephalic region of the cord, which is best adapted to sustaining the action of the brain.

A powerful and tumultuous action of the heart to which I have not yet alluded, is produced by the three cervical ganglia which cooperate with the basilar region of the brain, the seat of the turbulent impulses and animal force which we rouse by placing the hands on the neck near the cranium. The large neck is a well-known indication of strong circulation and strong passions. The cervical ganglia are equally cephalic and corporeal in their functions, and sustain the brain and heart in scenes of the wildest violence.

The anatomical commingling of nervous forces which we find serves as an additional illustration not only of the sympathies of organs, but of that intimate correlation and blending of functions which is revealed in the study of the brain, in which we find no organ which has not a diffusive influence, extending beyond its own jurisdiction into the sphere of other functions.

The intimate and overwhelming sympathy of the stomach with the brain, heart and lungs is explained not only by the pneumogastric and phrenic nerves, its direct channels, but by the connection of the upper dorsal ganglia with the splanchnic nerves, and the intimate relations of the Gastro-Abdominal tract in the brain

with the regions of sensibility, disease and insanity. But a full exposition of this subject would be beyond the scope of the present volume.

I would remark in conclusion, that in nervauric and electric treatment we are not to confine our attention, as has been the fashion, to the cerebro-spinal system, overlooking the immediate agents of vital functions, for it is well established that the immediate agents of all vital processes are the ganglionic nerves or ganglia. Animals may exist without a cerebro-spinal system, and the human fetus may be developed without either brain or spinal cord. To the ganglionic or subordinate system nature adds a controlling spinal system, and to this adds a controlling brain. But the ganglionic system thus overruled, carries on the machinery of life, and when we treat the spinal column we control the adjacent ganglia as well as spinal nerves, thus controlling circulation, sensation and unconscious action in the viscera. Physiologists have given very little thought to this commanding relation of the spinal cord to the viscera and none at all to the corresponding relations of the brain, nor have the ganglionic functions been studied in a practical manner for local treatment.

THERAPEUTIC TREATMENT.

Understanding the foregoing exposition of the spinal powers, the operator will have little difficulty in treating the spinal column — *the most important region of the body for the healing art* — according to the following directions, recollecting that we stimulate the impressible temperament by the application of the hand, by gentle percussion, or by the negative pole of an electric current.

1. To invigorate the brain, stimulate the junction of the cervical and dorsal vertebræ, or union of the neck and the trunk.
2. To reinforce this region, stimulate the region of sanity, just below the arms. The union of the two functions produces a greater effect.
3. For the more complete invigoration of the brain and the entire constitution, the treatment may be applied not only to the

cephalic region of the spine, but upon the entire shoulders, and the arms down to the elbow.

4. While stimulating the cephalic region, the effect may be assisted by dispersive upward passes from the margin of the ribs in front (region of disease). If a galvanic current is used, the positive pole applied by broad rheophores to the lower margin of the ribs on their anterior half, and the negative on the cephalic region, will produce a great concentration to the cephalic locality, — a very tonic sustaining influence.

5. If it be desired to use the brain power for intellectual purposes, we should also stimulate along the course of the sternum. At the lower end of the sternum it could be directed to impressional, psychometric and clairvoyant investigations. If the object should be a general mental elevation to a lofty plane of thought, opening the mind to spiritual influx, we should stimulate the region of Inspiration, on the side, parallel to the anterior line of the arm.

6. If we wish to use the mental energy in speech (conversation or oratory) we should combine with the cephalic the pulmonic region, just below it, which would cooperate admirably with the region of Inspiration. For mediumistic speech we need both Inspiration and Idealism — the latter being easily covered by the hand at the lower end of the sternum. The term Idealism is used for the whole Ideal region, including Imagination, Spirituality, Marvelousness and Intuition.

7. If we would use our mental energy for physical achievement we should combine with the cephalic region that of Vital Force, and the entire thigh.

8. If we would use it for an ambitious career, we should excite the energies of the arms — especially the regions of Ambition and Love of Power.

9. If we would use it for the attainment of moral excellence and perfection, we should extend the stimulation from the cephalic region, over the shoulder, on the front of the chest, as far as the nipples.

10. If our chief object is to encounter enemies and difficulties, we may also stimulate the lower posterior half of the body, espe-

cially the region on the level of the lumbar vertebræ and below. If our object is to gain social influence and ascendancy, we may stimulate the whole of the upper posterior surface of the trunk and the entire arms, or at least to the elbow.

11. To stimulate the cephalic region *in the head*, we may touch the regions of Firmness and Dignity. To produce a strong and harmonious combination of cephalic energies, we may extend the hand across Firmness and Dignity, so far as to include the regions of Sanity and Magnanimity, thus covering the posterior part of the cephalic region of the brain. In all cases we improve the sustaining faculties by passes upward and backward from Disease and Insanity (the cheek-bone and the under-jaw regions) towards the crown of the head, the capillary centre. The pass is a light brushing movement with the fingers.

12. To invigorate the lungs in any condition whatever, we may stimulate the upper half of the dorsal region (the six upper vertebræ). Precision in confining the hand to one locality is not desirable in therapeutic treatment, for adjacent localities are always cooperative. The pulmonic zone extends around the chest in the direction of the ribs, nerves and blood vessels; but on the frontal surface we have none of the elements of vigor. Hence, we do not extend our manual treatment beyond the side, in which we find a region of Inspiration (near the ends of the intercostal arteries) (see map) corresponding with the organs of Sublimity and Reverence—a region which animates the lungs, and prompts a fuller breathing by the ribs, but does not impart any vigor or tonicity, and would, therefore, not be beneficial in inflammatory conditions, which should be counteracted on the tibial surface of the leg.

13. To stimulate respiration on the head, we place the fingers on the region of Inspiration, extending them downwards if we wish to produce deeper inspiration by the diaphragm, the vigorous excitement of which is produced just over the cavity of the ear, at the same time stimulating the occiput on the same tract. On the body, we apply the hands on the upper dorsal vertebra, as low as the sixth, and on the corresponding pulmonic zone, along

the course of the ribs. The influence of the pulmonic zone grows calmer above, until it blends with the calm cephalic, and relates to the upper part of the chest. Below, it becomes more exciting and relates to the lower part of the chest, blends with the cardiac influence and rouses the diaphragm.

14. In treating pulmonary diseases it is always beneficial to reinforce the pulmonary vitality by stimulating the pulmonic region of the spine, but not beneficial to stimulate the region of Inspiration, except when respiration is imperfect, the lungs being dry, constricted or asthmatic. Congestive conditions of the lung such as pneumonia, or irritated conditions approximating pneumonia, are benefitted by stimulating not only the pulmonic, but the cephalic region, which energizes the arms. Both upper and lower limbs, when stimulated by the hands, by hot applications or stimulating plasters, divert from the lungs and relieve their congestions and irritations. A very simple and prompt method of relieving any congestion of the lungs is to retain a large amount of blood in the limbs by ligatures at the thighs and shoulders, tight enough to check the return of venous blood, but not to hinder the entrance of the arterial. This method is called HEMASTASIS. It is more efficient than the greater part of the medical treatment which has been in vogue, but has been signally neglected by the medical profession. Hemastasis is more effective when following evacuations by the kidneys and bowels, and when the limbs are kept warm. It is most efficient when practised by a vacuum apparatus, which diminishes the atmospheric pressure on the limbs inserted in it.

15. To rouse the diaphragm for forced respiration in asphyxia or drowning, we stimulate at the sixth dorsal, and around the chest to the sides on a level of the sixth and seventh ribs, by the hand or by Faradic currents. Friction and percussion with the hand, on the side, along the seventh rib to the spine, will be found useful. Faradic currents or alternating Galvanic currents through the sixth and seventh intercostal spaces from side to side, also from the side to the spine, at the sixth and seventh vertebræ,

will be the most efficient measures to restore and deepen respiration. But before such means can generally be attained, respiration may be restored by manual force. The patient being placed in a reclining position (say an angle of forty-five to sixty degrees above the horizontal) and vigorous compression applied rapidly to the abdomen and lower part of the chest by two or more persons, to expel the air which will be brought into the lungs by the reaction when the ribs expand by their elasticity, and the bowels descend by their gravity. The reaction of the ribs may be assisted by jerking the shoulders upwards at the moment. The continued repetition of these movements may recover from apparent death, and the recovery will be greatly assisted by Galvanic currents from the hypochondriac region of the body to the cephalic region of the spine, and by alternating Galvanic currents across the base of the brain posteriorly, as well as the currents recommended for the diaphragm.

16. To rouse the liver, we stimulate along the sixth to the eighth vertebra, and the corresponding ribs. It is not desirable to carry this beyond the middle of the lateral surface, as it becomes a depressing, peevish, hypochondriac influence anteriorly. When we would rouse from a torpid state, the liver being small or contracted, we treat on the side, but in congested, hyperemic, irritated or inflammatory conditions, the treatment should be on the back — one hand on the Hepatic location and the other on Health.

17. From the eighth to the twelfth dorsal vertebrae inclusive, we stimulate the stomach and the organs immediately below it. The gastric zone extends along the direction of the ribs, and the specific anterior location for exciting hunger, thirst and love of stimulus corresponding to the organ just in front of the ear, is on the abdomen below the ribs about six inches from the umbilicus, and three or four inches higher. At this locality, we may not only stimulate digestion, cooperating with the spinal location, but may control the drunkard's thirst by dispersive passes on the sensitive, — stimulating at the same time the power of fortitude and temperance, which is roused on the top of the shoulder. This may be achieved by electric treatment, placing the positive pôle at the

gastric location just mentioned, and the negative on the middle of the upper surface of the shoulder. /

18. From the tenth dorsal to the last lumbar vertebræ we energize the functions of the bowels, and along the Gastro-intestinal location on the abdomen we may assist in the same effect. We may use the hands, or the Faradic and Galvanic currents. Upon the spine we energize at the same time the lower limbs, but at the abdominal locations the tendency is more relaxing than invigorating. Hence, the positive pole is more appropriate to the abdomen and the negative to the spine.

19. On the lumbar vertebræ, especially the lower half, we may invigorate the calorific energies, which are developed by the organ of Calorification, located on the abdomen, with the difference that the latter is more feverish and superficial in its effect and the former more substantial and wholesome, being associated with general vigor.

20. At the upper lumbar vertebræ we may excite the urinary organs—the kidneys being adjacent to the lumbo-dorsal junction and deriving their nerve power from the renal plexus, coming from the tenth and eleventh dorsal ganglia.

21. At the lumbo-sacral junction, and about three inches below it, we may excite the sexual energies, as this region is the source of sexual functions in both sexes. Sexual desires and exhausting excesses are prompted by the sexual organs, and by the inguinal region, illustrating the general law that anterior organs tend to debility and exhaustion. To disperse from the groin and energize the lumbo-sacral region is the general rule in disorders of the sexual organs, unless we wish to suspend all action in that region, in which case we stimulate the cephalic region on the spine and below the axilla, which is a proper treatment in hysteria—a treatment which is sedative and antaphrodisiac.

22. In the treatment of paralysis, we should recollect that the upper limbs are controlled from the fifth, sixth, seventh and eighth cervical and first dorsal vertebra; consequently, this is the locality at which the arms are to be strengthened by stimulation with the hand, or by a Galvanic current sent to this locality from the

hypochondriac region, or by moderate Faradic currents for a few minutes through this part of the spine or between this part and the hands. Dry cupping on this part of the spine gives relief to pains in the arms or convulsive affections. Irritated conditions of this part of the spine may be relieved by vigorous dispersive passes, by dry cupping or by the positive pole sending a current toward the hands or the feet.

23. Paralytic affections of the lower limbs involve the whole region from the dorsal vertebra to the end of the spine, and require treatment by the hand and by Galvanic or Faradic currents on the entire space — on the lumbar region for the thighs and the sacral region for the legs. Currents to the spine for five, ten or fifteen minutes are more beneficial generally in paralysis, as Galvanism is the proper excitant for paralyzed or enfeebled nerves; but an alternation of currents is beneficial. The negative pole too long applied has a congestive and solvent or softening influence, which may be counteracted by the positive. After the negative pole has stimulated the cord and its circulation sufficiently, the positive pole on the spine may be used to send some of the accumulated energy into the limbs. In stimulating the spine with the negative pole it is not necessary that the positive pole should be placed on the limbs; on the contrary a better effect may often be produced by placing the positive pole on the opposite anterior surfaces of the body — as a backward-going current is always tonic and invigorating. The upward current develops the spinal cord at the expense of the limbs. As a general method, I would recommend a current from the frontal surfaces of the trunk to the spine, followed by alternating Galvanic currents between the spine and the limbs. If the operator has not a commutator, he can change the position of the electrodes, or shift their connections with the battery. A moderate Faradic current between the spine and the limbs is suitable for their invigoration, but *not while the paralytic condition continues*, which is benefitted only by the Galvanic current. Local Faradism upon the muscles helps to stimulate their growth and development.

24. In treating the various portions of the spinal cord for their constitutional effects, there are six different methods.

First. Vital manual treatment, by touch and percussion to stimulate, and by dispersive passes with the hand, for removing morbid conditions. Moderate friction with the hand serves also for stimulation. There are some sensitives who are favorably affected by breathing upon the part to be treated.

Second. Galvanic currents are stimulant by the negative, and sedative, but tonic by the positive pole.

Third. Faradic currents are strongly stimulant and should be used with moderation either on the spine, or on the spine and the affected organ, or on the muscles, or on the dry skin which hinders the current from passing inwards. The current should be moderated by using large sponges or broad carbon plates or electrodes, and very few cells when the electrodes are near together.

Fourth. Mechanical treatment may be used by dry cupping to remove irritation and pain — by hot water for a very short time, for its sedative and soothing effects — by cold water or ice for a similar purpose, which must be continued for a longer time to prevent reaction. The rubber bag of hot water or of ice is a very valuable application.

Fifth. Stimulant and tonic plasters are a valuable adjunct in spinal treatment, and may be made more efficient by combining them with suitable remedies or by applying the remedies on the spine and covering them with the plaster. The California Laurel, a new remedy, is one of the most efficient of all agents for restoring spinal energy, especially in paralytic conditions. Scutellaria combines with its soothing properties, a restorative influence on the lower half of the spine. Almost any medicine may be applied on the spine in the form of an ointment.

Sixth Counter irritation on the spine, when obstinate chronic difficulties resist all other measures is effected by mustard plasters, cantharides, ammonia and concentrated acetic acid — also by moxa and the momentary application of the hot metallic button, heated to the temperature of boiling water, for the removal of pain. One of the most powerful of all counter-irritants. for the removal

of morbid conditions is the compound tar-plaster, or irritating plaster of the Eclectic Dispensatory; its effect is slow and very unpleasant, but efficient.

25. Paralysis due to the brain affects that side of the body which is opposite the cerebral hemisphere that is affected. Hence it requires treatment on the brain where the cause (softening or hemorrhage) is located. Treated by the hand it requires a strong operator, and he should stimulate the cephalic regions on the spine and under the axilla, also the superior posterior or hygienic region of the head, using at the same time dispersive upward passes from the cheeks and under jaw to the crown of the head. Downward manipulations on the back of the neck and along the jugular veins will also be beneficial. The site of the hemorrhage will probably be at the base of the middle lobe, near the upper frontal line of the ear. Hence dispersive downward passes on that region will tend to promote absorption and check any irritation or inflammation. Manual treatment is safe, and after a week from the attack a mild Galvanic current through large carbon electrodes or sponges might be passed through the affected hemisphere to the opposite hand or shoulder blade, or the cephalic region of the spine, to disperse morbid conditions. Faradism should not be used in such cases. The hand should be applied to the occipital base, where it covers the cerebellum, and to the hygienic region at the same time, but we should avoid exciting any part of the regions anterior to the ears. Treatment of the spine in these cases, by manipulation and percussion is a beneficial auxillary to the brain treatment. Nervauric and Galvanic treatment are appropriate in all cases of paralysis, and the best results are produced when the operator administers the positive current through his own hands, thus combining the nervauric and Galvanic powers.

CHAPTER V.

RELATION OF THE BRAIN TO VITALITY IN ITS DIFFERENT REGIONS.

Division of the brain by the vertical and horizontal line. Rational illustration.

Plan of the human constitution, front and back, above and below the ventricles. Fundamental law of direction. Action of basilar organs. Their effect on the body. Coronal organs antagonistic to the basilar. Effects of each. How the paralysis of either becomes fatal. Anterior and posterior basilar organs. Seats of vital force at the base of the brain. The anterior basilar region and its subdivisions. The gastric region. The love of stimulus, effect of its developement. How to control intemperance. Medical remedies. The moral and religious cure. Effects of malaria and of animal food. Treatment of the digestive organs through the brain. General character of the antero-basilar region. Calorification, how to excite it,—how to protect it. Effect of its overaction. The respiratory region. Signs of pulmonic disease in the mouth. Region of Sensibility. Its confirmation by Ferrier. The organ of Language. Heating and cooling the temples. Region of Somnolence and its mental phenomena. Anterior coronal region. Temporal region.

THE brain may be divided by a vertical line through the ear and a horizontal line running back from the middle of the forehead.

The vertical line separates the occipital from the frontal half, leaving the impelling forces in the occipital half, which constitute physical and moral power, by which we succeed and conquer, while the frontal half contains the physical, moral and intellectual sensibilities, which yield to the mental influence of others, and the influence of physical objects, obstacles and injuries. The *predominance* of the frontal, results in physical and moral weakness, amiability and refinement, without power to resist disease, exposure or hostility. The occipital makes the positive, and the frontal the negative character — one the leader, the other the follower. The occipital character was illustrated in the crania and martial career of the New Zealanders (an equal match for European

troops) and the frontal in the gentle, harmless Peruvians — victims of Spanish slaughter. The New Zealand crania are as remarkable for occipital development as the Peruvians are for occipital deficiency and frontal predominance.

The general plan of the human constitution places power in the rear and sensibility in front. The senses are exercised in front, and the maximum degree of sensibility is at the epigastrium where a severe blow may give a fatal shock. The skin in front is more sensitive than at the back, and the muscles in front respond more readily to electrical excitement. The muscles of the face and front of the neck are very sensitive to electric excitement; the muscles of the back are relatively much less sensitive, and the muscles of the posterior aspect of the upper and lower limbs are less sensitive than those of the anterior and inner aspect. Beard and Rockwell say of the head, "in health the head is very sensitive, both to Galvanization and to Faradization in all parts except the posterior. In health the spine is but little sensitive to the current."

The horizontal line divides the regions of the brain (below the great ventricles) which are in close communication with the body, by the ramifications of the ascending fibres of the spinal cord, outspread in the crura, thalami, striata and cerebellum) from the regions above the ventricles, which are not in close communication with the body, but are directly connected with each other, and unitized by the great commissure, the corpus callosum, which connects the right and left halves or hemispheres.

The fundamental law of cerebral action (which will be fully developed in the volume devoted to Pathognomy) is that all organs act in accordance with their line of direction. The basilar organs (below the ventricles) act upon the body, impelling all its vital energies and voluntary actions, and by this action they expend the cerebral energies, producing exhausting and destructive effects. Hence their tendency *per se* is not healthy and beneficial in a physiological sense, while morally they produce the unbridled sensuality, selfishness and restless violence which, in control, are criminal and degrading. Their influence is beneficial only when

acting harmoniously in conjunction with the higher power. The passions and appetites are essential in their subordinate places, but fatal as rulers, being alike ruinous by their exhaustive violence, their sensual excess, their incessant agitation and their hostile relations to our fellow-beings and to all supernal influences.

Nevertheless, the basilar organs have been regarded as the seat of animal life, and surgeons have found injuries of the brain more fatal in proportion as they are located further back from the forehead to the base of the occiput. The reason of this is that the basilar organs are the organs of manifestation of soul life in the body, without which all power of manifesting life and volition would be lost. The muscles would cease to contract, the heart to beat, the lungs to respire. The tendency of the coronal organs *per se* is to withdraw life from the body to the spirit, the immediate effect being self-control and tranquillity, and ultimate effect, in abnormal excess, trance and death of the body.

Injuries to the basilar organs are fatal because they sever the connection of soul and body by depriving the body of that influx of energy which comes from the brain, thus suspending every physiological process. The suspension of digestion terminates life in a few weeks by taking away the material necessary to the blood and the structure of the organs, — the suspension of circulation terminates it in a few hours, or perhaps in a few minutes, by suspending the influence of oxygen; and the suspension of respiration terminates life in a few minutes.

The isolation, paralysis or destruction of the basilar forces suspends all these processes, and thus arrests life in the body, but leaves it perfect in the soul, as it separates from the body.

Thus the action of either the coronal or the basilar region of the brain alone, while the opposite region is more or less paralyzed, is fatal. The loss or exhaustion of the upper region of the brain leaves the animal forces, passions and sensibilities in riotous excess, without sustaining power, resulting in disease, exhaustion, insanity and death. The loss or exhaustion of the basilar region while the upper region is active, leaves the soul in full develop-

ment, but unable to act upon and vitalize the body, the death of which must follow.

The cultivation of both coronal and basilar regions is therefore necessary, and as the physician is mainly occupied in restoring the bodily organs which have lost their vigor or their texture, he is required to sustain the higher organs, which are the source of brain power, and also to invigorate the basilar organs. The latter is a large part of the duty of the nervauric healer, and he is frequently required to place his hands on base of the brain behind the ears, to supply the amount of vital power which the enfeebled brain has ceased to yield. In doing this a correct knowledge of cerebral organology is highly important.

The basilar region, like the coronal, is divided by the vertical line through the ears into anterior and posterior regions — the posterior being the region of vigor and the anterior of sensitive impressibility. Hence the application of the hands to the base is chiefly made on the posterior region. This produces an increase of life, strength, circulation and nutrition throughout the person. The comfortable warmth, the increased strength and the gradual improvement of every function make this a very agreeable operation to the patient. In those who are extremely impressible, the basilar excitement may go too far and stimulate restlessness, or the violent passions, but this seldom occurs with patients, and is counteracted by the operator's presence and the diffusive influence of his vitality. The posterior basilar cooperate with the posterior superior organs, and the anterior basilar with the anterior superior organs of the amiable sentiments. Hence the amiable sentiments tend to sensitive weakness and the heroic impulses to violence.

The vital force sustaining the muscular system is specifically reached at the organ of vital force, at the base of the skull, half way between the mastoid processes (just behind the ears) and the median line. On the median line in the depression extending two inches below the occipital knob, we stimulate a vitality which has more influence on the nervous than the muscular system, which invigorates the senses and the sexual system, and is especially beneficial to the eyes. To apply the fingers of one hand at this spot,

and the fingers of the other across the brow immediately over the eyes, overcomes weakness of the eyes and resists their diseases. (The reader will understand of course that such remarks apply to the impressible temperament.)

I do not propose to give a full statement of the physiological organology of the brain at present, but merely to give certain localities easily learned, and often used in nervauric treatment, through the head.

The anterior basilar region (antagonistic to the upper occipital) has many localities that should be understood. Immediately before the cavity of the ear is the region of the gastric appetites (marked on the phrenological busts as the organ of Alimentiveness, and erroneously extended above the zygoma or cheek bone) corresponding to the place where the upper end of the jaw bone works in its glenoid cavity. The stimulation of this locality excites a feeling of hunger which becomes at length debilitating if not satisfied, but its stimulation, when the stomach is occupied by undigested food, relieves the oppression more than a dose of pepsin, and even relieves flatulence. We sometimes hear the effect in a few moments. In my early experiments in 1841, the subject, Mr. V., was made hungry enough to begin eating a tallow candle.

The intensity of hunger, however, is not always proportional to the desire or demand for food. The demand is sometimes eager when the depressing effect of hunger is not felt, and the depressing effect is sometimes great, when the attraction or impulse to take food is small. Hence if we would invigorate the stomach most effectively, it may be necessary to stimulate the posterior basilar region also, which gives the impulses and desires.

The posterior portion of the Gastric or Alimentary organ, immediately at the cavity of the ear, is the portion which makes the drunkard, when it controls, and which originates the craving for stimulants in common use, such as tea and coffee, mustard spices, etc. When I stimulate my patients in this region they desire a stimulus stronger in proportion to the excitement, until even a delicate lady of temperate habits will delight in the strongest brandy or whiskey. The depressing influence of this organ

is counterbalanced by the stimulus taken, which restores equilibrium and does not intoxicate unless it exceeds the natural demand. Hence old topers show no intoxication after taking their half pint of alcoholic liquids, for the same reason that the man depressed by the bite of a rattlesnake shows no stimulation after taking a pint of whiskey. But persons in whom this organ is small, or who are ruled by a great preponderance of the coronal region are easily intoxicated, and this class are most rapidly destroyed by intemperance. When one is already under the influence of alcoholic liquids, the organ of Love of Stimulus should be excited to promote sobriety, by counteracting the intoxication, for the same reason that we excite the gastric organ when overloaded with food.

To counteract the habit of intemperance, the opposite region of the brain, which is a region of temperance, cheerfulness and fortitude should be stimulated. In the impressible subject this may be done by the hand, and the stimulus of this region destroys the appetite for alcoholic stimulation. If this be done by any method which effectually rouses the higher moral sentiments, intemperance will be conquered, and this has been done extensively in the inebriate asylums of New York and Philadelphia, which rely upon religious influence.

Tonic medicines necessarily overcome this depression and rouse the moral and physical energies, taking away the appetite which originates the desire. *Hydrastis* is one of the most efficient and wholesome tonics for this purpose, and when I recommended it thirty-five years ago, I heard favorable reports of its effects from my pupils. Quassia has also been successfully used, — so have the sulphate of chincona, strychnia and some preparations of gold, all of which are powerful tonics. *Berberis vulgaris* (the barberry) is also an excellent tonic for this purpose and very wholesome.

As the drunkard's thirst is dependent on the basilar region, and controlled by the coronal, it seldom appears among women, and it is very effectively resisted by religious influence. The restoration of drunkards in religious asylums in New York and Philadelphia has been marvelous, and as intemperance is associa-

ted with the basilar organs, its effective conquest can be made only by cultivating the moral nature. As long as men indulge the violent and selfish passions they will have the corresponding appetites. Moral education alone can abolish intemperance. A healthful atmosphere contributes to temperance as a malarious one contributes to intemperance. Animal food which stimulates the base of the brain favors intemperance, while a vegetarian diet, and especially the use of fruit, has the opposite effect.

The stomach and bowels may be treated through the brain, the gastric and abdominal tract being located along the course of the lower jaw—i. e., we reach the organs through this external locality. But in overcoming dyspepsia, constipation, etc., I prefer the treatment on the body according to the principles of Sarcognomy, although the head treatment is highly beneficial when the impressibility is marked.

The general character of the antero-basilar region, as already stated, is sensibility to impressions or excitements, and a tendency to nervous expenditure of vital force. This sensitive excitability is antagonistic to the vital power, and renders us so susceptible of painful, exhausting, overpowering impressions as to become the great inlet of disease. Extreme sensibility cannot exist without extreme liability to injury. Hence the anterior inferior region is the region of morbid capacities, and requires to be overbalanced by the occipital half of the brain, to make a strong and hardy constitution.

But this region is not *necessarily* morbid. It gives immense capacity for enjoyment by the physical and mental sensibilities and if no injurious impression is made, its action is healthful, though sensual and relaxing; but no one can pass through life without encountering many injurious influences, physical and moral, and realizing his capacities for disorder of body and mind. Irregularities of climate, exposure, malaria, unsuitable food, excess or privation, anxiety, anger, disappointment, etc., are inevitable, and can be overcome only by the occipital energies. Hence we perceive that the habitual indulgence in luxury and sensual pleasure undermines the constitution and lays the foundation of disease.

The morbid tendency of the antero-basilar region culminates at the anterior end of the middle lobe — against the sphenoid bone, behind the malar bone which gives prominence to the cheeks below and behind the eyes. This is the locality of that irritable sensibility which is easily injured, and gives the greatest liability to disease; and as its excessive action results in disease, it is marked "Disease" and its stimulation to any great extent is debilitating and injurious. Hence the bracing effect of the cool breeze striking the face, and of manipulations in which the fingers pass rapidly and lightly backward and upward over this region toward the crown of the head — the method generally adopted in relieving debilitated and oppressed conditions. Passes made in the opposite direction are quieting, relaxing, debilitating and somewhat soporific — sponging the cheeks and temples with warm or hot water has a beneficial effect in feverish, excitable, nervous or depressed conditions.

There is a lower grade of vitality in structures adjacent to the sensitive anterior base of the middle lobe and the corresponding location of the body, the hypochondria especially. Hence the diaphragm and the tongue are the first muscles after death to lose their electric contractility and next come the muscles of the face. For the same reason diseases in the throat, such as diphtheria, have a very prostrating influence over the whole constitution.

The region of the anterior base which we reach below the jaws has the same relation to the mental as that at the cheek-bones to the physical health. It gives that degree of excitability which is easily exhausted and easily excites to phrenzy.

Hence it produces liabilities to melancholy, idiocy and mania, the excitement running beyond the control of the will, and becoming injurious to the brain and the mind. The idiotic tendency is located anteriorly, the violent posteriorly, and the melancholic superiorly, and on the jaw. The position of the insane region is in the interior portion of the base of the brain, near the median line.

The location of the insane and morbid tendencies at the base of the middle lobe is probably the reason that the morbid conditions

of the brain substance are more frequently found there than in any other part.

A temporary dementia or mania is easily produced in impulsive subjects, by stimulating the insane region. Conditions of mental depression and disorder are relieved by dispersive manipulations, upward and backward, over this region, or downward to the shoulders. The downward manipulation is effective in clearing the frontal brain. The brain being supplied by two great arteries and veins, the carotids and jugulars, at the side of the neck and the vertebral arteries and veins at the back, its circulation is promptly affected by downward manipulations on the side and back of the neck.

Hence I usually begin the treatment of headache by downward manipulations on the back of the neck, followed by similar manipulations on the side, and by dispersive passes, generally backward, on the spot where the pain is located.

The upper posterior region including the crown of the head, extending from right to the left posterior angle of the parietal bone, (marked on the old phrenological busts as Cautiousness) is the region antagonistic to disease and insanity, where the application of the hand produces the most beneficial and restorative effects on body and mind.

Through the chin we operate on the medulla oblongata and stimulate the production of heat. Hence this locality is marked Calorification.

We know by Chossat's experiments in vivisection, that the production of heat in the body depends upon the transmission of innervation, downwards from the brain, through the spinal cord to the ganglionic nerves of the abdomen.

When we place one hand around the chin, and the other around the occipital base, the circulation and evolution of heat, are at once increased and directed downwards. Thus we warm the lower limbs and break up chills.

The calorific power being thus located, enables us to understand why a little woollen clothing around the chin and neck is more protective to our warmth than five times the amount else-

where. When this region is left unprotected and cold penetrates the base of the brain, the power of resistance is thus overcome and sleep follows which ends in death.. Calorification is one of the exciting and wakeful faculties. Hence the cold weather which stimulates our heat-forming power gives greater clearness and wakeful energy to the mind, and hot weather, which diminishes calorification, promotes drowsiness. The hottest part of the day is given to the siesta in warm climates. For the same reason, whenever intense cold penetrates the base of the brain and diminishes calorification, the drowsy influence is felt, which is a dangerous condition as it shows that the power of resistance to cold is disappearing.

The over action of Calorification in mental ardor, excitement and fever is exhausting, like that of all other antero-basilar organs, whenever it is more than sufficient to counteract the effects of external cold, and exalts the temperature of the body. For the same reason hot climates produce a more excitable and less energetic or enduring constitution, the effect of heat being to stimulate the anterior sensitive region of the brain, developing more delicacy and refinement than strength.

If the hand, in covering the chin, extends up and around the mouth the effect is seen in increased respiration.

The external indications of the respiratory tract are around the mouth and nose, through which respiration occurs. Prominence of this region is a sign of greater respiratory power. The portion just below the mouth is indicative of deep respiration and is associated with greater force of will and violence in coughing. The sympathy of the lungs with this region is shown by many facts — such as the brick-red line along the front teeth and gums which is developed in pneumonia, and the facility with which some persons catch cold, after shaving around the mouth. I have been told by some that they wear their beards rather than shave, for the sake of this protection.

The application of the hands on the respiratory region stimulates the lungs and the respiratory processes. Applied just below

the mouth they excite depth of respiration. The depth of respiration is usually increased in exciting calorification.

The antero-basilar region also contains, just above Disease, the organ of Sensibility, which gives power of sensation to the opposite side of the body, according to the law of decussation which governs the brain in its connection with the body.

The region of Sensibility connects anteriorly with the organ of Language discovered by Dr. Gall and confirmed by the observations of pathologists, who neglected his discovery until confirmed by numerous dissections of morbid brains.

My own discovery of the organ of Sensibility forty-five years ago has been confirmed by the cruel experiment of Dr. Ferrier upon a monkey, in which, by injuring the base of the middle lobe, he destroyed the sense of Feeling on the opposite side. The location in the monkey, however, appeared to be farther back than in man.

The close connection of Sensibility and Language in the brain with the source of voluntary muscular action in the *corpora striata* explains the association of the paralyses of motion, sensibility and language — paralytics often losing the power of speech or command of language.

Dispersive passes upward and backward over the temples not only relieve morbid conditions, but diminish sensitiveness, and tend to remove pain. They are especially beneficial in morbid conditions of the eyes and intolerance of light. Heat and excitement accumulated in this region produce a great increase of sensibility and impressibility, and sometimes develope the mesmeric somnambulism.

The tendency to dreamy, somnolent conditions, somnambulism, somniloquence and clairvoyant trance is connected with the locality about an inch behind the brow, marked Somnolence, by touching which a few minutes in the impressible we cause the quivering and closing of the eyelids which precedes a dreamy sleep or clairvoyant trance. This is a good method of inviting the approach of sleep or of making intellectual experiments on the intellectual powers and sympathies developed in that condition, in which psychometric

perception and intuition, trance and even clairvoyance may occur.

In the upper half of the brain, the anterior portion antagonizes the occipito-basilar region, producing a gentle, harmless, unselfish nature, and moderating the violence of the passions and vehemence of the desires. In neryauric treatment, this region is chiefly useful for soothing purposes, brightening the intellect, elevating the sentiments and promoting contentment, or improving the moral nature, and friendly sentiments.

The lateral portion, along the temporal arch, is the proper location for placing the hands to subdue restlessness, loquacity and sexual impulses. The most posterior portion of the arch, vertically above the ear, is the location for resisting insane and hysterical conditions — the region marked *Sanity*.

There is a remarkable coincidence and similarity between the organs on the median line and those located on a parallel line, beginning at the external angle of the brow, and running along the ridge between the lateral and superior surfaces of the cranium. Hence breadth of the upper surface of the brain compensates for the lack of height.

CHAPTER VI.

ZONAL ARRANGEMENT AND THERAPEUTIC TREATMENT OF THE BRAIN.

Explanation of Zonal Arrangement, with illustrations. Its indications of constitutional developement. General law of functions. Vertical Zone of Excitability. Treatment on the cephalic region. Treatment of the heart. Of the thoracic region, and of the liver. The gastric and abdominal region, and the Crural. The Morbid Zone explained. Hygienic caution, and curious illustrations. Relation of disease to the brain. Treatment of the crural region. The sexual region. Treatment of special functions. Health and disease. Sleep and wakefulness. The ideal powers. General vigor. Feverish conditions. Mental soundness. Warmth. Mental discipline.

THE zonal arrangement of the brain is a necessary consequence of the laws of Pathognomy. Our review of the spinal system shows that as the organs of the body occupy successive zones, their controlling centres in the spinal system are necessarily in similar successive order, viz. : the cephalic, pulmonic, cardiac, phrenic, hepatic, gastric, abdominal, pelvic and crural — the lumbar and sacral regions being at the same time abdominal, pelvic and crural, as the cephalic region is at the same time cephalic, brachial and partly thoracic — the internal visceral organs being associated with the external muscular, in the spinal functions, and a similar arrangement being apparent in the brain — the visceral and the energetic faculties being on the same plane or in the same zone — as in the spinal column, they occupy the same segments.

The arrangement is so clearly exhibited on the map that we need only to grow familiar with the locations to understand their treatment, guided by certain general principles.

Each cerebral zone indicated on the map, tends to direct the vital forces according to its name and gives prominence to the

region it represents. This is its direct physiological influence, on the constitution.

But aside from this direct physiological influence, each cerebral locality has its psychic function, and this psychic function compels the same physiological action which is promoted by its direct influence; and this wonderful combination of psychic and physiological influences, by a perfect, but simple and intelligible law, is one of the grandest illustrations of divine wisdom.

To illustrate this remark, all the functions of the organs in the *cephalic* zone are of a cephalic tendency. They increase the vitality and power of the brain by the exercise of their functions, such as Spirituality, Reverence, Sublimity, Tranquility, Sanity, Dignity, Firmness, Moral Ambition and the moral sentiments of the coronal region. In the thoracic zone we have organs of a more active character which produce more excitement and consequent expansion of lungs, and are not content with tranquil study. It includes the more active forms of Ambition, Love of power, and Social impulses, Self reliance, Coolness, Caution, Sublimity, Reverence and Inspiration. In the *cardiac* zone we have Excitability, Apprehension, Social Impulse, Business Energy and Self-reliant Ambition. In the *Phrenic*, *Hepatic* and *Gastric* zone, are Irritability, Combative Violence, Jealousy, Avarice, Dogmatism, and Arrogance, the passionate impulses which have made the mental portrait of the bilious temperament. In the *Gastric* and *Abdominal* zones we have the selfish, restless, violent and gloomy passions which stimulate the appetites and promote intemperate indulgence while they rouse all the muscular energy of the lower limbs. Thus do the psychic faculties concur with the physiological organs they stimulate through the brain. The unity and harmony of the human constitution are no where more clearly perceived than when we study the psychic powers in all their phenomena, and trace their effects on the constitution. But this is a vast study, which can be illustrated only in the volume of Anthropology. (The volume on this subject was issued in 1854, and a greatly improved edition will be issued within the next two years.)

To comprehend the zonal arrangements for therapeutic pur-

poses, we need only apply the general laws of cerebral science — understanding that each zone uses and stimulates its own region of the body. We may examine the developement of the head, to see what organs predominate in the constitution or which are deficient. Thus if the head be very broad and high at the cephalic zone and very small in the crural, we know that animal life and muscular energies are below par, and that the predominate action of the brain in its upper and anterior regions diminishes still more the basilar energy. Hence there is probably a failure in the muscular energy, and in the nutrition. The body is apt to be imperfectly developed, and the physical powers weak. On the contrary, when the crural region is large, we have a robust physical development, muscular energy, and in some cases stoutness or corpulence. If the cephalic region be *proportionally* small or imperfectly developed — there is less mental and moral energy, and a greater tendency to exhaustion of the nervous system and all forms of nervous disorder.

If the Gastric and Abdominal zones are defective in development, there will probably be great feebleness or inactivity in the digestive organs — with appetites feeble and easily controlled.

If there be great narrowness or lack of developement at the Hepatic zone, the liver will be found inactive, and liver diseases are a probable consequence.

If the cardiac zone be largely developed we shall have a strong circulation with the consequent excitability and energy of temperament and a greater passionnal energy than is desirable, which will be absent when the cardiac zone is moderate.

If the pulmonic zone be large it will give the temperament a brightness and activity less restless and turbulent than that which comes from the lower organs, but less calm and self controlled than the cephalic temperament. The pulmonic and cardiac zones are mingled in the thoracic zone, of which the upper part is properly pulmonic, and the lower is cardiac and pulmonic, relating to the lower part of the chest.

These remarks are not sufficient to guide one in a physiologi-

cal examination which requires a knowledge of all the organs, but will serve to explain the significance of the zones.

The general law of the brain is that organs have a more refined, delicate, intellectual character as they approach the front, and a more energetic, reactive character toward the back — also that they have a more refined, lovely, pleasing, spiritual character as they ascend, and a more gross, selfish, repulsive and violent character as they descend.

Hence, when we look at the zones, we find the energy of each organ indicated by the posterior, and the delicacy by the anterior part of the zone; while on the side of the head, between the front and back, there is an excitability which gives activity without permanent power, and in front there is a capacity for manifestation that only exhausts, and requires to be controlled by the repose of sleep.

Looking along the sidehead, from the ear up, we easily recognize the excitable activity of each organ, but we must look further back for its vital force. Thus along the whole side of the head and body, we have a longitudinal and vertical segment of excitability for all the organs, intermediate between the exhaustive delicacy of the front, and the enduring power of the back, upon which latter, as already stated, the curative processes of nervauric healing are chiefly effective, and to which Galvanic currents carry the energy that develops life and strength; as has been shown by Onimus and Legros.

There is so little physiological utility for the healer in the anterior regions, that I present the zonal arrangement of the head only to the line of activity or excitability, without carrying forward the zones to the regions of exhaustion, of which the most complete and pernicious is at the anterior end of the middle lobe, at which we locate the organ of Disease.

When the nervauric physician would treat the brain he applies his hands upon each of these zones to invigorate corresponding organs, as he might, if he had control of circumstances, invigorate them by the exercise of the organs in the natural way — for example, he might invigorate the heart, not by stimulating with

the hands the cardiac region of physical courage, but by placing the patient in a position which would require the exercise of physical courage. He might invigorate the refined action of brain, not by placing his hands on the region of Reverence and Sublimity, but by placing him in grand scenery or cathedral scenes which would rouse those faculties.

I present the zonal treatment of the constitution through the brain, as an important adjunct to healing on the body, but not as a *complete* statement of cephalic healing, which requires minute knowledge of the cerebral organs, nor as an exact exposition of Anthropology.

Proceeding upon the proposition that energy is a posterior quality — a quality of the occiput, the healer would place his hands on the anterior part of the cephalic zone, above and a trifle in front of the ear, when he wishes to give a stimulus to cerebral activity without calling forth its strongest capacity. The calm, emotional thought thus elicited at Reverence, Sublimity and Tranquility, is a pleasant condition, but is not the strongest display of brain power. Moving his hands further back, he elicits the influence of Sanity, which is closely analogous to that of Firmness. This faculty gives a strength of mind and tenacity of brain, stability of will and power of concentration which resist all the exciting, depressing and deranging influences from which insanity comes. Magnanimity, a little further back, gives still greater positive strength of mind, and from these two organs across to the median line we find still more active sources of cerebral power in Cheerfulness. Energy, Heroism, Firmness, Sense of Honor, Approbateness, Oratory, Ambition, Dignity and Self-Reliance or Self-Confidence.

Under the influence of these organs he is not a passive, calm thinker or listener, but feels a disposition and has the power to impress others with his own thoughts, and thinks with an energy and brilliance which is impressive.

As in the cephalic zone, so in each zone activity is frontal and power occipital. Each organ of the body may be roused by its cerebral zone; and hence the entire occipital region furnishes a

rousing energy for the whole person, whether stimulated by the nervauric hand, or by the natural circumstances that rouse our energy, ambition, courage, passions and appetites.

When the healer is familiar with the zones, he has a simple task in cerebral treatment to give the organs excitement or stimulation, if torpid, through the lateral section, the vertical zone of excitability, and to reinforce them, if lacking in power, by the occipital portion of their zone.

The *heart*, for example, may be roused by the excitability in the vertical zone, just in front of the ear (Cardiac zone); but it is very seldom indeed that any such excitement is desirable. The increased rapidity and force of its action produced in that way is like that produced by alarming or exciting scenes or dangers, and would, as a general rule, be quite exhausting, if carried far. But the increased vigor of action produced in the occipital part of the zone by Adhesiveness, Combativeness and Love of Power is not of that exhausting character, and, if not carried to excess, would be very beneficial in a debilitated state of the heart, which is very common — a state of dilation in which it is expanded and its muscular coat thinned (especially on the right side), — a condition especially frequent among females, and recognized by the sonorous action of the heart — its beats being heard throughout the chest and distinctly recognized at the back.

The best locality for cardiac stimulation is not Combativeness, which is too exciting or forcible, and extends below the cardiac zone proper, but posterior to Adhesiveness in the organ of Business Energy, which may be located by a line running back horizontally from the centre of the forehead and stopping two inches short of the median line of the occiput. This corresponds with the cardiac location on the spinal column, and if the two localities were simultaneously excited the effect would be enhanced.*

The region of cardiac excitability sometimes needs tranquilizing, and its antagonist is the region of Firmness, which gives stability

* It was by these organs that I controlled the pulse of Dr. Lane before a committee of Boston physicians in 1843, and produced an enfeebled action of the heart similar to a low stage of fever, as described by Dr. Flint and reported by Dr. Bowditch.

and tranquil regularity. The organ of Health gives the same stability, with a little more of agreeable activity. These localities should be firmly fixed in the mind of the physician — Firmness on the median line vertically above the cavity of the ear, and running back about two inches to the organ of Dignity; Health, parallel to Dignity, midway between the median line and temporal arch (which forms the ridge between the lateral and superior surfaces of the head).

The organ of Calorification, reached through the chin, cooperates with that of cardiac excitability, and adds to the rapidity of the heart's action (which is illustrated in fever), and consequently the organ of Coolness, in the thoracic zone (on the middle of the sidehead immediately behind a vertical line from the posterior portion of the ear) is one of soothing and strengthening influences for the heart. In a case of pericarditis, or any inflammatory affection of the heart, we need the influences of Firmness, Health and Coolness, with dispersive passes by the hands or the sponge of warm water (or hot water) on the cheek and temples, passing over Disease and Cardiac Excitability backward and upward.* In angina pectoris we should place our hand on the middle of the dorsal region, and with the other make dispersive passes upward and backward over the heart, and especially over the region of Cardiac excitability on the body, below and behind the nipple. (See plate.)

The Thoracic region at the temples produces a nervous and sanguineous determination to the lungs, prompting expansion by the ribs, or costal inspiration. This inspiration, as a physical act, promotes spiritual inspiration, which will be found in those who have a full developement along the line from pulmonic excitability to the external angle of the brow.

* The first important application of my discoveries to the treatment of a serious case of disease, in 1841, was in the case of a young man, at Louisville, dangerously ill of pericarditis, in whom I had perfect control of the heart, through the brain, and taught his attendants to soothe the action of the heart by sponging with warm water the cardiac region on the side head, which was more effective than any medical treatment that he had received. On his recovery he ascribed his cure to the treatment I administered and directed, which was entirely through the brain.

In dry, asthmatic or constricted conditions of the lungs this pulmonic excitement may be beneficial, but it would be objectionable in pneumonia, or any inflammatory irritation in the chest, in which we need the invigorating influence of the pulmonic energy at the back part of the pulmonic zone, one and a half or two inches from the median line, where we find the same influence as on the back between the shoulders, four or five inches below the neck, the best locality for the invigoration of the lungs. But all severe irritations or inflammations of the lungs are best treated by tranquillizing derivation — by stimulating the anterior tibial surface of the leg.

The Thoracic region on the sidehead assumes a more exciting character as it descends, and rouses the heart and lower portion of the lungs — passing then into the Phrenic zone it rouses the diaphragm and develops a more extensive and exciting respiration. Hence we may say that the entire sidehead below the cephalic zone tends to increase the activity of respiration — the lower portion increasing its depth by action of the diaphragm.

The *liver* may be stimulated by applying the fingers on the hepatic region, adjacent to the meatus auditorius (cavity of the ear); but in proportion as we extend our application backward on the same level, we give it a greater amount of vital energy.

The fact that the cerebral organs are the organs of psychic impulses does not modify the truth of this doctrine of therapeutic treatment, for the psychic impulses in each zone are precisely those which affect the physiological organs to which they correspond, and with which they effect their purposes. When we study their functions we perceive that each organ in the cephalic zone requires the use of the brain — that each in the Pulmonic gives greater energy and activity to normal respiration — that each in the Cardiac zone is associated in its action with greater activity of the heart — that each in the Hepatic zone tends to increase the energy of the liver, and that all below the Hepatic zone promote the energy of digestion and consumption of food by their restless impulses and animal force.

The *Gastric* and *Abdominal* region, lying in front of the ear,

along the jaw bone, is the cerebral source of that activity in the stomach and alimentary canal which creates the exhaustion of hunger, and is therefore an important region to treat in cases of inactivity or disease of the stomach. A *predominant* action in this locality would not be the best thing for gastric health, but in touching this region the vital influence of the operator adds an element of health, and I frequently place the thumbs on Health, while the fingers stimulate the gastric organ.

The most effective energy for the gastric abdominal region in treating the brain will be given by placing both hands on the Gastric zone, covering the base of the cranium, while the fingers rest upon the Gastric organ just before the ear, or if standing before the patient, to place the thumbs on the Gastric organ, and the hands around the base of the cranium.

Immediately below the Gastric and Abdominal zone comes the *Crural*, which we cover with the hands on the neck — in the psychic sense it is a region of turbulence and restless animality — in a physiological sense the stimulation of the lower limbs to action and developement. The demand for food, and the ability to dispose of it when swallowed depend mainly upon the posterior part of the Gastric Abdominal zone, and we have an interesting confirmation of this in an experiment of Dr. Ferrier, in which the desire for food in a monkey was destroyed by an injury of the posterior part of the brain.

The depressing influence of hunger and of gastric irritations may be diminished by the antagonists of the Gastric organ, which produce a feeling of buoyant energy and fortitude, which destroys the feeling of hunger. The organ of Fortitude, which resists the weakness and depression of hunger, and other gloomy influences, is in front of the organ of Health, and exterior to the organ of Firmness. This does not produce entire indifference to food or incapacity to enjoy it, but relieves the gnawing and depressing feeling of hunger. To produce indifference to food, it would be necessary to rouse the antagonists of the Gastro-Abdominal region — the emotions of the upper surface of the brain which lies in front of the vertical line. It is quite a familiar fact that love pro-

duces indifference to food. The greater activity of the superior conditions in women is the cause of their moderate appetites, which do not run into intemperance and gluttony.

A *morbid* or irritable zone may be recognized at the junction of the hepatic and gastric zones, each of which partakes largely of morbid capacities. Anteriorly, on the body, the morbid zone presents the epigastric and hypochondriac regions. The hypochondriac is so sensitive to all injurious influences as to become the chief inlet of disease, and is therefore marked as the region of Disease, while the epigastric is a region of extreme sensibility. The morbid zone contains the most degenerate blood in the body, the maximum congestive tendency, and the greatest sensibility to injury. A blow on this region anteriorly, is the most prostrating and fatal that can be inflicted, and irritations in this region have the most depressing effect on the vital and moral energies. In Claude Bernard's experiments on the stomach of living dogs it was found that the introduction of a little boiling water threw the animal at once into a kind of adynamic state, which was followed by death in three or four hours. The mucous membrane of the stomach was found red and swollen, whilst an abundant exudation of blackish blood had taken place into the cavity of the organ. Like injurious effects, to a greater or less degree, followed an introduction of other irritants, such as nitrate of silver, or ammonia." There is no other portion of the body where such prostrating effects could be produced by so small an amount of injury. Entire limbs may be destroyed by inflammation or suppuration, and large portions of the lungs may be destroyed by ulceration without fatal consequences. The destruction of life by hot water in the stomach, should warn us against the dangerous effects of continual drugging by harsh remedies, against which nature revolts. Medicines should be made so agreeable in their taste and other properties that they could not offend the stomach or the senses. It is difficult to accept the man as a friend, who insults us at his first approach, or who gives us a painful blow, and it may be as difficult to reconcile the stomach to the offensive agents that we thrust upon it, while it readily yields to the beneficent influence of

mineral waters and of homœopathic medicines which are inoffensive.

Warm clothing around the waist is very debilitating and even prostrating, especially in warm weather, and the cooling of the waist by a wet cloth, or as it is sometimes called, a wet pack, is often very wholesome and bracing. The anterior half of the morbid zone is a region from which dispersive passes are very often required and upon which we may often with great benefit apply the positive pole for currents to any part of the posterior surfaces of the body.

A curious illustration of the character of the morbid zone was furnished in the experiments of Brown Sequard, who found that in dividing one-half of the spinal cord, between the seventh dorsal and third lumbar nerves in the guinea pig, the animal in from three to five weeks became epileptic; also, that on the injured side there was a space one and one-half inches long by one inch wide, just below the ear, where irritations or pinchings would produce the epileptic fit. This cerebral sympathy corresponds to the principles of Sarcognomy.

The experiment of cauterizing the lower lobe of the ear for sciatica, which is said to have been successfully performed in France, is another illustration of the same principle.

Another illustration of the morbid zone was furnished in vivisections to destroy the supra-renal capsules, an operation of no formidable character, but in which the animals would die from injury of the solar plexus, unless great skill were exercised.

Morbidness or tendency to disease consists in an extreme capacity for feeling and being affected by injurious influences. Hence it can be developed fully only at the frontal regions. Farther back, as reactive energy appears, it assumes the character of irritability and quarrelsome or domineering aggressiveness—a condition morally morbid, which propagates moral and physical disease among its victims. This zone extends along the base of the brain, just over the meatus auditorius (cavity of the ear) and embraces a group of impulses which are discordant and wretched when they predominate, leading to a miserable life..

The reader will bear in mind that we do not regard disease as the primitive or normal function of any organ, but as the result of malign impressions on the sensitive and irritable condition, which belongs to certain organs. The morbific faculties are those which are most easily disturbed and which have the least reactive power, and the morbid results occur when their irritation overpowers the sustaining vital energies which belong to the opposite class of faculties. Hence if the morbific faculties predominate in the constitution, morbid effects inevitably occur under the ordinary circumstances of home life.

As the *Crural region* (the source of the energy of the lower limbs) nearly coincides in the spinal cord and in the brain with the *Gastro-Abdominal*, it follows that active locomotion is an efficient invigorator for the digestive organs, and that the exercise of the cephalic zone giving predominance to the higher organs of the brain would diminish the activity of stomach and bowels which is usually the effect of sedentary, intellectual pursuits. The organs below the diaphragm all require an active life to give them energy, and in nervauric treatment they require the hands to be placed around the basis of the cranium.

In addition to the Morbid Zone at the waist, which affects the physiological functions directly, there is another at the base of the pelvis which tends strongly to the disorder and prostration of the nervous system in mania, idiocy and paralysis. It corresponds to a cephalic zone at the base of the cranium, the anterior portion of which is the region of Insanity.

When the hands are applied around the neck they are on the crural region and send a stimulation into the lower limbs, giving them warmth and strength, and reinforcing animal life generally.

Although strictly speaking the organs developing through the neck (or reached through the neck) are those which correspond with the lower limbs and rouse their muscular energy they are associated with organs a little higher, as the lower limbs are associated with the lumbar and sacral regions of the spine, the source of their impulses. Hence the base of the occiput, including Combativeness, should be impressed as well as the cervical

region, when we would make the strongest impression on the lower limbs.

On the median line, on the level of the crural region, just below the occipital knob, corresponding to the middle region of the cerebellum and posterior to the medulla oblongata, is the region of Sexual Energy, corresponding with the lumbo-sacral junction of the spinal column, which vitalizes the sexual organs, adds much to the general vigor of the constitution and gives a great stimulus to the nervous system, corresponding to the normal effects of sexual development, and therefore highly important in reanimating impaired constitutions. I have been especially struck with its value in renovating feeble or diseased eyes. The fingers of one hand being placed in the median fossa just mentioned, and the other in front, on the central organ of vision, just over the centre of the eyeball gives a restorative, brightening influence to the eyes, more effective than any other mode of cerebral treatment. In giving this treatment the optic nerves and their origin in the tubercula quadrigemina (optic lobes) are between the two localities treated.

The *Sexual* functions respond to two localities, the cerebellic fossa, already mentioned, a seat of physical energy, and the prominence of the larynx on the front of the neck, which coincides with the anterior surface of the spinal cord, near the foramen magnum. The doctrines of Gall, in reference to the cerebellum, were but an approximation to the truth, its sexual functions occupying only a small portion on the median line.

Finally, while I regard the zonal arrangement as valuable, both in a philosophic sense and for therapeutic uses, I do not regard it as at all exempt from the intricate blending and cooperation which we find in the spinal region. Each organ has secondary relations or cooperations above and below its own zone, especially when influenced by the action of others.

Thus, Alimentiveness, in its common action, developing hunger, excites the reckless, combative, domineering energies of its own zone, which demand "bread or blood," and which in carnivorous animals drive them to attack their prey. But when fully satisfied it cooperates with the Cheerfulness and Serenity of

the moral region, and then acts with Adhesiveness, desiring society and with its physical influence which promotes nourishment and assimilation. Hence the pleasures of the table are best enjoyed socially, and few would desire to be solitary at their meals.

The region of Adhesiveness on the body is on the line of the intercostal nerves that surround the stomach, and the line of the splanchnic nerves that supply the stomach through the ganglia of the solar plexus. Hence we should expect it to cooperate as it does with the digestive functions.

Similar remarks may be made of the other zones, but they are not necessary in this brief exposition.

Special Functions for Cerebral Treatment.

HEALTH AND DISEASE:—When the fingers are placed on Health it gives a delightful recuperative influence to the whole system, and when passes or gentle frictions are made, upward and backward toward Health, from the region of Disease (at the cheek-bone occupying the anterior end of the middle lobe, just behind the eyes, it adds materially to the effect. The influence of the organ of Health is heightened by placing the entire hand across the superior posterior region, covering Health and its neighbors. The hygienic region is the posterior part of the cerebral zone of the brain, and a part of the cephalic zone of the body, which illustrates the proposition that health is a high spiritual function depending mainly on the soul and brain.

SLEEP AND WAKEFULNESS.—The wakeful faculties are the intellectual, energetic and restless. The centre of wakefulness is the intellectual organ of Consciousness, located in the centre of the forehead. Its antagonist is located on a line running back from it horizontally, about three-fourths of an inch behind a vertical line corresponding to the back of the ear. This may be called the organ of Sleep, but it is only when excited into absolute predominance over the frontal organ that it manifests the sleepy influence. Its normal influence when we are awake is to invigorate the automatic life of the body, and counteract the exhaustive influence of the intellect — also, to restrain its discursiveness and

confine its action to objects nearer, more easily understood and of more practical value; and when the intellectual organs are fatigued to bring on sleep and sustain the unconscious processes of interior life.

I have often produced sleep by this organ, and I find it best to use the organ of Somnolence, an inch behind the brow, to facilitate the process. The region of Somnolence greatly increases the impressibility; after the fingers rest upon it a few minutes, a calm, dreamy feeling is developed and the eyes wink or close. A dreamy sleep is produced in the very impressible, and sometimes runs into completely unconscious sleep. When the two organs are touched at once, a sound sleep is the usual result, which may be assisted or retarded by other influences. The amiable organs of the upper surface of the brain produce a contented quietness which favors sleep. Patience and Tranquility (see map) assist as Irritability and Turbulence hinder. The most efficient cooperation is the organ of Lethargy, which we reach just above the Larynx (see map), which promotes a dull drowsiness. In removing sleep we disperse from Somnolence, Lethargy and Sleep, upward and backward, touch the organ of Consciousness, the organ of Light (or vision) and any of the energetic organs such as Health, Energy, Ambition and Turbulence.

THE IDEAL POWERS.—For the display of intellectual and spiritual phenomena, we may excite the Somnolent region to increase impressibility and intuition. By the organ of Spirituality (see map) we may excite the capacity for feeling and perceiving spiritual influences, which may be brought to the mind by holding on the forehead a letter of some deceased friend, or a picture—the psychometric impression from which will bring a consciousness of the present condition of the departed. To give more varied perceptions we may touch the region of Clairvoyance, lying at the root of the nose (occupying the internal base of the front lobe).

GENERAL VIGOR may be promoted by placing one hand across the region surrounding Health—the superior posterior part of the occiput, and the other around the lower part of the occiput or by placing the fingers upon Health, Vital Force and the sexual region in the fossa, below the occipital knob.

FEVERISH CONDITIONS may best be treated on the body, but may be assisted by treatment on the head, making dispersive passes from Disease to Health and stimulating the organ of coldness, which lies on a vertical line corresponding with the posterior margin of the ear, extending two or three inches upward from the level of the top of the ear.

MENTAL SOUNDNESS.—The region of Sanity is the seat of those energies which resist every form of mental disorder, whether Insanity, Dementia, Melancholia, Monomania, Lethargy, Idiocy, Childishness, Hysteria, Delirium Tremens, Rage, Homicidal Mania, Suicide, or Kleptomania. The insane tendencies are reached under the jaw; hence passes from the junction of the neck and the jaw toward Sanity would have a good effect. Melancholy has a somewhat higher location (on the lower angle of the jaw) and the special antagonist of Melancholy — the region of Cheerfulness — is situated just above Sanity, being above the parietal ridge and on the superior aspect of the head. The excitement of the organ of Cheerfulness produces a delightfully cheering effect, removing all mental depression. The special locations of Idiocy, Childishness, Hysteria, Melancholy and Lethargy are shown on the map.

WARMTH.—The region of warmth in the head is the anterior aspect of the medulla oblongata, and its external surface is at the chin. The hand placed around the chin stimulates Calorification, and the effect is enhanced by placing the other hand on the occipital base, which is a cooperative region. If the hand also extends down the neck in the crural region it tends to throw the warmth to the lower limbs.

MENTAL DISCIPLINE AND CONCENTRATION are best promoted by the region of Sanity, especially its anterior portion, in which we find that power of quiet concentration, as well as the disposition to local attachment and fixedness of residence which phrenologists have ascribed to the space just behind Dignity or Self-Esteem on the median line — a location which I find entirely erroneous. It is the regions of Insanity and Turbulence which destroy mental concentration.

CHAPTER VII.

HEALTH, AND ITS RESTORATION.

Definition of Health as an organ and faculty. Why that name is used. Effects of the organ of Health. Animation. Position and influence of the organ. Its ethieal and spiritual relations. Vital power and animation, disease and death. Function of the shoulders and crown of the head. Relation of Health to ethies and religion. Its position in the brain between the moral and physieal. The spiritual as the support of physical Health. Deficiency of language for nomenclature. Bia, Zoe, Anima, Animus, Psyche, Psychobiosis, and Psychodynamia as names. Animation and Health. Difficulty of expressing psychie and physical life in conjunction. Their combination in the superior posterior region of the brain and body. Healthful physieal and moral exercises. Cultivation of the sentiments qualifies for healing. Love and Health correlative. Experience of Dr. Jennings. Personal healing by Newton and others. The religious and spiritual elements. Necessity of scientific preparation for healing.

PSYCHIC TREATMENT.—Permanent or constitutional health should be established. This requires moral power, not passive or negative, but active virtues. Power, the element of success. Pursuit of duty the only satisfactory success. The higher virtues—heroic. Happiness may be brought to families and a perfect education to youth. Psychic treatment an indispensable part of education. Health and Virtue twin brothers. Special directions for treatment by the hand and the battery.

THE object of all treatment is the restoration of health, and it is necessary to understand in what that consists. Health, in the *negative* sense, is freedom from all disturbing injurious influence, leaving us to enjoy all the pleasures of life as we obtain them.

In this sense health is obtained by removing from the blood all noxious or imperfectly vitalized elements, and promoting the absorption and removal of all objectionable structures, such as the tubercle of consumption, or the cells of cancerous matter, leaving the vital force to act unincumbered.

To effect this, we must rouse all the secreting organs to the full performance of their duty; for the purity of the blood depends on the perfection of the secretions. This must be done either by

medical or nervauric treatment. We must find the organ, or organs, which are diseased or sluggish, and rouse them into proper action, at the same time strengthening the vital force to assist.

But health in the positive sense means much more than this. It means a healthy or disease-resisting constitution — the predominance of vital power, resisting injuries, over Sensibility and Excitability which succumb. Hence, after the restoration of morbid organs and relief from morbid conditions, we should energize the faculties and organs which give the highest conditions of health.

Perfect health is a condition in which there is a large amount of physical and moral energy, and in which the sensibility, excitability and irritability, though sufficient for all necessary purposes, are small in comparison with the vital forces, which endure and resist the attacks upon our sensibility.

The revolutionary discovery of the new Anthropology is, that all forces and faculties belonging to man have their special seats in the brain, and corresponding positions in the body. Every elementary power or tendency culminates to a certain locality. Health culminates to its locality in the brain, on each side of Self-Respect or Dignity, and in the body to the middle of each shoulder blade. The developement of these two localities insures a healthy constitution. But I must protest in the beginning against the phraseology which I am compelled to use by the poverty of the English language. The word Health does not adequately represent the function of the cephalic and corporeal organs to which I have applied it, for the word has merely a negative meaning, signifying freedom from the influences which cause disease, and their results. No cerebral organ can give us freedom from the causes of disease, and thus compel health, but as the organ in question gives us the vital force which resists disease, and thereby sustains a vigorous health, I have hence been induced to use the word health to express its function, as it generally produces health when sufficiently developed, as the opposite sensitive region is sure to result in disease if sufficiently developed. The word health, therefore, as it expresses the tendency of the organ, has been used for physiological and hygienic instruction. It is not deceptive, for

the influence of the region of Health, either in the brain or in the body, whenever excited, is to produce an immediate improvement of the physical and mental condition. The lungs expand more freely and pleasantly, the brain becomes clearer and more active, the emotions more vivid, the impulses stronger, the muscles more ready for action, the countenance more inclined to smile, and all the viscera, lungs, stomach, liver, kidneys, etc., begin to feel better, and, if troubled with any disorder, to diminish or remove it. It is the general renovator of disturbed functions, and the power that resists the encroachment of all malign influences on either mind or body. But health is only one aspect of its effects — the negative aspect. Its positive character is *vital power* and harmony — *normal life*. It animates alike the physical and the moral constitution. It is cheerful, energetic, strong, pleasing, attractive. It gives perfect and exuberant activity to the entire physical, social, moral and intellectual faculties. It animates every nerve, function and faculty to normal action, and if required to select the word which comes nearest to expressing its efficient and ubiquitous influence, as I have habitually witnessed it in the impressible and felt it in myself, I should select the word ANIMATION. But the word animation must be understood in its largest sense as animation of the entire being in its perfect action and sustained power and virtue. Indeed the word *virtue* is almost as good a name as animation.

Animation, as developed by this organ, vitalizes and perfects the entire being, and its antagonist in the region of disease, uncontrolled, reduces both soul and body to worthlessness — the body going into the decomposition of death, and the soul being often reduced also to helplessness until released from the body; for the capacity to suffer and not to act is a fatal condition.

Perfect health — that is, abundant vital power capable of resisting all causes of disease or depression, and sustaining by sympathy and nervauric action the health, energy and spirits of others — depends upon the large development and cultivation of this region of Health and Animation — it requires a large development of the shoulders and the crown of the head, and the posi-

tion of this function in the constitution is such as to give by its connections (being in the upper half of the brain) a decided predominance of the coronal or moral elements, while by its posterior locations it gives all the necessary energy to the occipito-basilar organ, in which we have a *vital force*, unregulated by the moral, needing the control of the intermediate organ of Health which sustains both.

The organ of Health, by sustaining the higher faculties, not only controls the excesses of the lower, but places man in harmony with the supernal powers, and the influx which is the interior of his life. Thus the true science of health is connected with ethical or religious science, and the performance of duties; and all hygienic science which rests in the physical alone will fall short of human needs. The emotional or spiritual part of man's nature is as important as the physical, and this is being continually demonstrated by the vast number of cures made by spiritual and religious methods, without any drug agency.

The fact that the organ of Health stands intermediate between the moral and physical agencies of the constitution, so as to give to each its own just proportional activity, explains the great necessity for soul culture, and physical culture in any proper system of hygiene and education, and gives us an entirely new view of the philosophy of human developement and of the intimate relations of health with virtue and religion, whereby we learn the importance of the cultivation and exaltation of health as a religious duty, and the criminality of its neglect or abuse. True and complete Godliness brings with it physical perfection and power — power to encounter exposure, danger and toil, triumphantly, as did the Apostles. But the purblind theologies, which have been in fashion, take little account of the body, though saintly and apostolic history shows how gloriously the body has been sustained by the spirit, not only in such as Joan of Arc, but in many thousand earnest seekers of divine life.

We cannot say too much of this philosophy of man's nobler life, which has been so little understood; we have not even language fitting for its expression. Language must advance, both

in its concepts and its combinations to keep pace with science and philosophy.

The *Bia* and *Bios* of the Greeks, whence our Biology, belongs to material life alone. They express only the lower life, that which lies behind the mastoid process, which occupies the cerebellum and medulla oblongata — which ceases with their decomposition and which is not life, the characteristic of which is its indestructible permanence.

Psyche, the soul, comes nearer to our conception of the central power, but it has been used in a mental and spiritual sense, which isolates it from the bodily life and should carry us into the high realms of spirit life. But the unspiritual genius of European races continually tends to the degeneration of language. It has degraded Biology into a purely physical science, and it has nearly expurgated the soul essence of Psychology, reducing it to a little more than a *speculation* on mundane mentality — confounding *Psyche* and *Mens* — Psychology and a barren Metaphysics.

We might be tempted to unite the spiritual and physical in such a compound as Psycho-biosis, but that would be a clumsy patchwork of elements, each of which is withered and degenerated in literature.

We need a single word containing in itself the ideas partially represented by the words Manhood, Life, Health, Virtue and Animation, with an intimation of the exuberance of a happy nature, but there is no such word to express a happy and efficient Psycho-zoic existence.

Our verbal difficulty arises from the fact that soul and body objectively (and not subjectively) considered, are so far apart and distinct in the common mind, which dwells on material things that they are seldom unitized in thought. A different set of words applies to each, yet such is their parallelism that a single word is often applicable to them both — as, for example, Firmness, Energy, Excitement, Restlessness, Tranquillity, Languor, Depression, Weakness, etc.

Psycho-dynamia, or psycho-dynamy expresses much of the

compound idea, but conveys more of the power and less of the happy, normal completeness of life than belongs to the health region of the brain. It expresses mainly the firmness and dignity which are found at the posterior part of the sagittal suture, and at the summit of the dorsal region of the spinal column.

The Greek *Pneuma* is closely analogous to *Psyche* and has not been desecrated by metaphysical speculation. *Pneumatology* has been left to represent the real and substantial science of the soul, apart from the body, but as it represents the separated soul it cannot represent the embodied soul, with its armament of physical power. Pneuma represents, by its double sense, the air or breath which is the influx of the body and the analogous aura or soul which is the influx of the brain. Hence, Pneumatics is the science of the atmosphere and Pneumatology the science of the ethereal realm of the soul.

Nearly equivalent for the Biological is the Zoic group of words — Zoon, a living creature (whence *Zoology*, the science of animals), Zoos, living; Zoe, life; Zoeros, vivacious or full of life; and Zootes, the animal nature, as opposed to the Divine nature. The life thus expressed is like the biological, and lacks the psychic or pneumatic element.

In the Latin, too, we find that words representing air or breath represent also the spiritual element, as if it had been intuitively perceived that our spiritual life is like our breath, an influx of the invisible.

Anima, signifies alike the air or breeze, the breath and the vital principle or life. Thus it represents animal life, though sometimes poetically extended to the departed spirit. *Animus* is a word of more vital and energetic meaning — it suggests the thinking, feeling, willing, emotional soul. It suggests all the strong emotions, impulses and determinations of the departed spirit, and is not void of courage, hope and pleasure. It is, therefore, the most expressive word for the full normal life which comes from the superior posterior region of the brain. Anglicised in *animation*, it expresses better than any other term the central element of life and character, which I find the supremely beneficent and dominant

quality of perfect life. Possibly some other ancient language may have a better expression, but the Romans, whose powerful *animus* ruled the world, have given us the best word extant in our language for our present purposes; but even this has not as much of the pleasing, attractive, persuasive, charming, ethical element as nature has given us in the supreme faculty which wins as well as commands, which gives to life its best enjoyment and highest success. We need three words such as health, energy and happiness or cheerfulness to express its full influence and power; though animation may correctly express its influence when the moral element is lacking, and, therefore, may often be an adequate expression. It gives animation alike to the intellectual, moral and animal faculties and tends to give them a symmetrical development.

Speaking of this supreme faculty, as I have done, for therapeutic effects, I have called it HEALTH, because perfect, active health is the condition which it produces; when in predominance it develops active, exuberant, attractive and pleasing animation — it gives a feeling of purity and brightness in the entire person, and a glow of kindly, social feeling, fitting one for every social duty. I am almost induced to coin a word to express this admirable faculty, but for the present let the word Health answer with a rich and abundant significance, including animation.

Understanding then, that the superior posterior region of the brain and the superior posterior region of the body are the harmonic centres of perfect life, whatever they may be called —(this perfect life being concentrated at the location provisionally named Health) to give this nobler portion of the constitution absolute predominance in ourselves and in our patients, is what we should seek as healers, and any system of bodily exercises which strongly develops the shoulders, especially such as the healthlist and rowing, will be an important addition to our curative resources, not only for the patient but for the healer himself, who should frequently use such exercises, and will find them beneficial, especially just before going to heal his patients.

In addition to these physical exercises there are certain moral

exercises, by which the healer sustains himself in his duties. These moral exercises consist chiefly in making friends and followers, by attractive and impressive manners, in associating with friends and gaining the strength which comes from their admiration, love and sympathy. He should, therefore, as a truly religious man, cultivate the most affectionate and hospitable sentiments towards all, and should endeavor, not rudely or boldly, but in the most pleasing manner, to take the lead in society, and make himself an object of interest. If he can take the position of a public teacher or lecturer it will make an important addition to his moral force, and if he can so cultivate his nobler nature as to become the centre, the reservoir, or the channel of that purest health, life and love which belong to the spirit world, he is then admirably equipped for his mission.

The sustained strength of his own perfect life enables him to diffuse a similar sustaining energy, while his love gives him a pleasure in uplifting others, and a power to benefit them by his mere presence, and everything that emanates from him.

Love and life are correlative. Love is that which energizes and sustains life. Love in each member of a family sustains life in all the others. Wives pine in health when the husband's love declines — men decline in their whole nature when not sustained by love at home. The patients of a loving physician delight in his presence and live upon his influence, regardless of his drugs, as was shown in the somewhat famous case of the honest Dr. Jennings, of Derby, Conn., who, about forty years ago, becoming convinced that his medicines produced little good effect, gradually reduced his doses, and finally gave them up entirely, substituting bread pills and colored powders and liquids, and continued a practice so successful that after he had publicly confessed that he used no medicine the people adhered to him and could not be persuaded to patronize another physician, even when recommended to by Dr. J. himself.

To what extent the mere presence of the healer may be a substitute for all other healing agencies depends upon his personal endowments. Dr. J. R. Newton, Dr. G. Swan and many others

have cured successfully without contact, and at a distance, and it is presumable (but not inevitably necessary) that these remarkable cures were made with the cooperation of attendant spirits. Prayer, which brings in spiritual cooperation, has cured so many hundreds in a public and very marvelous manner that no candid student acquainted with the facts can doubt that the religious element is a large part of the healing power — operating not only by the loving and curative energy developed in the constitution of the healer, but by the abundant spiritual influence which he attracts to himself spontaneously, as well as by prayers.

Armed with health, vigor, buoyant energy and love, guarded by the precautions I have fully explained and reinforced by the invisible power which aids the spiritual minded man, the healer must be successful, and in proportion to his power, may achieve those results which the world calls miraculous.

But to achieve any results wisely and well he must thoroughly understand that in which he is engaged. He must thoroughly understand the human constitution and the laws of its operation which are developed by **SARCOGNOMY**. Even when he acts as the passive instrument of spirit power the same knowledge is important, for the ability of the spirit to produce results depends largely upon the character, the natural capacities, and acquired skill and knowledge of the medium. The highest manifestation that spirits can make of artistic, musical, literary or philosophic power, depends upon the natural capacity and acquired skill of the medium. Through a medium of artistic ability fine works of art are produced which would be impossible under other conditions — wise utterances come through mediums of superior intuitive intellectual power, and the very best medical results will be produced only through mediums of good intellectual power, well educated in the sciences of life, disease and therapeutics.

It is evident that a spirit operating through any medium must be hampered by the limited powers and ideas of the medium's brain, even if the mediumship be complete and passive. The wisdom and moral power of a man cannot come through the brain of a child or a horse. An ignorant and unscientific medium cannot

do full justice to the healing art. Moreover, the spirits who come to aid in treatment are in many cases themselves too ignorant and unscientific to compensate for the deficiencies of the medium.

The healer who is neither gifted with psychometric intuition, nor sustained by spirit power, nor instructed in Sarcognomy, must operate in a blind and often erroneous manner in nervauric and electric treatment.

The noblest embodiment of the healing art — the most worthy of public esteem is the physician who has been drawn into the profession by his active benevolence and psychometric skill in understanding diseases, who, after going through the usual studies of the colleges has perceived the inadequacy of their remedies, and devoted himself to the investigation of the *materia medica*; who has felt the inadequacy of their physiology and philosophy, made himself acquainted with the power of what is called animal magnetism, and then recognized its destitution of a scientific basis, has found in Sarcognomy the laws of nervauric and electric healing which he applies under the guidance of his intuitions, while using remedies selected with similar skill adapted to the varying conditions of patients, instead of the mere names of diseases.

PSYCHO-HYGIENIC TREATMENT.

The enlightened healer will not limit himself to treating the derangements of the body; for so close is the parallelism of physiological and psychological processes that one cannot be treated without producing an influence upon the other. When we restore the body to health we improve the functions of the brain, and assist the moral nature.

But actual health or relief from the conditions of disease produced by injurious causes is merely a state, and is not fundamental or constitutional health — the possession of a health power to resist disease and to sustain every function of life. One may be relieved from disease and yet be extremely liable to falling again into depraved conditions. Hence the permanent improvement of the constitution is more important than the immediate relief of morbid conditions, and it is a characteristic doctrine of

the new physiology that this improvement and elevation of the type of the constitution requires an increase of the moral power — an increase of those calm energies which belong to the soul and to the superior regions of the brain and the body; hence all hygienic treatment should be ethical in tendency, and the healer should aim to leave his patient if possible with an exalted energy in his higher nature, which would tend to lead him into a better and healthier life.

But in cultivating this noble manhood and womanhood it is important not to mistake the passive negative virtues for the divinely sustaining elements of life. All conceptions of duty are relatively worthless which do not lead to action.

The amiable sentiments must exist in sufficient force to control all selfish and misanthropic feelings; but *mere* amiability with unselfishness is not the condition or character to which the law of the universe accord success, and the happiness of robust health; and thousands of good people with this false ideal in their minds have met with misfortunes, both physical and spiritual, from acting on this erroneous view, and have found fault with the world and its Creator, because they have been unfortunate when they have not conformed to the conditions of success.

The survey of the world in any department with a spirit of candid search for truth, will teach us that *power* is the chief element of success, but that the only satisfactory and happy success is that which is attained by noble means. The success of the carnivorous animal, the despot, the soldier, the miser or the knave is a physical success in which there is very little happiness, and often very little health. But that success which is gained by heroic energy in the pursuit of noble aims, with pleasing manners that win the love of all, is the only true and satisfactory success. This comes from the upper occipital region in which the higher energies reside, and which is associated with the upper posterior portion of the trunk.

Our conception of virtue should be that of a positive power, acting with that broad sympathy and intuitive understanding which realize that happiness cannot be an isolated condition, and that

he who would enter the sphere of true happiness must make a sphere of happiness around him in human beings, and should never relax in the pursuit of the noble aims to which his life is devoted. Firmness and energy are the virtues that command success and he who fails to exercise them should blame himself and not the world for his failure. Godliness, a God-likeness which brings success, is not the sentimental and egotistic quality cultivated by the Pharisee, but that nobler quality which achieves grand results in thought, in action, in society, in government, and in the triumphs of civilization—a quality which in Patrick Henry moved multitudes, in Washington ruled a nation, in Jefferson led the progress of liberal thought.

To cultivate these virtues as accessory to health, the healer should keep his patient under the influence of the upper zone of the body and of the brain, in a cheerful, energetic mental condition. The tranquil amiability of the upper frontal surface of the chest should be combined with the amiable but positive energy of the summit of the back, on and between the shoulders, and of the arms. *The gentler virtues should never be separated from the energies.*

By these manipulations discontented and discordant husbands and wives might sometimes be restored to harmony, as the causes of quarrels which seemed so important while they were under the influence of irritation and gloom would appear very unimportant when good humor was restored. The restoration of harmony would contribute greatly to the restoration of health, for there are thousands whose health is depressed by domestic inharmony.

In the management of children psychic manipulation is very important, for there are few that might not be favorably affected. The more impressible class are creatures of circumstances. In a turbulent school they speedily absorb all the depravity they mingle with; but the gentle manipulation of parents may remove many evil influences, conquer ill temper and confirm habits of application. This treatment will hereafter claim an important part in systems of education, and no one will be considered qualified as a

teacher who cannot with his hands exert a soothing and refining influence.

The evil tendencies of the animal nature will be subdued in body and in brain by dispersive passes and by Galvanic currents, while the virtues will be energized at their source in the upper regions of the brain and body, as indicated by Anthropology.

Psychic or moral treatment is not within the scope of this volume, but it becomes incidentally a part of the therapeutic treatment, and it certainly comes within the duties of the true physician, the competent healer, for health and virtue are twin brothers.

To carry out the doctrines of this chapter, the physician should aim to establish the predominance of the shoulders and the upper occipital region of the brain.

1. First, he should use the refreshing dispersive passes from the lower margin of the abdomen toward the shoulders. This disperses morbid and debilitating nervous conditions. A similar influence may be produced on the head by brisk dispersive passes from the cheek-bones toward the crown of the head — the centre of the scalp, which is near the posterior end of the sagittal suture.

2. He should stimulate the shoulders and the whole upper dorsal region for a space of six by twelve or fifteen inches across the back by the application of his hands and by a gentle percussion, using vigor in his muscles, but gentleness of touch in contact, unless in a robust person.

3. When the hands are resting on the back they should be in the centre of each shoulder blade. If the operator is a sensitive percipient he will recognize, while his hands are in this position, the increasing comfort and brightness in the patient's condition, and if he is left in that condition, its beneficial influences will in many cases continue for hours.

4. The effect may be enhanced by placing one hand across the upper occiput from right to left, covering the region of Health, while the other is on the Health region of the shoulder.

5. If the patient is nervous, restless or melancholic, one hand may be placed in the armpit at the region of Cheerfulness, while the other is on Health, or both may be applied at Cheerfulness.

6. If the patient has any selfish, morose or gloomy qualities, or is lacking in the enjoyment of kindly emotions and elevated views of duty, the hands should be applied on the upper surface of the shoulder and the chest as far down as the nipple, the effect of which will be soothing and pleasant as well as beneficial to his moral nature, and will assist in the restoration of health. This is the remedy for bad temper, selfishness, gloom, and domestic discord.

7. While the hand is kept on the shoulder or the healthful region of the head, special treatment may be given with the other hand in application to the various localities that need attention, the effect being greatly enhanced by the hand on the shoulder.

8. If treatment be administered by the battery, the hygienic current should be administered by applying the positive pole with a broad electrode (a carbon plate or large sponge wet with warm salt water) at the hypochondria, the spot marked as the region of disease, and the negative with a large electrode on the health region of the shoulder. For the best effect there should be two electrodes or rather rheophores to each pole, that the right and left sides may be treated simultaneously. The current may be given from five, ten or twenty cells according to the sensibility of the patient and continued from five to twenty minutes. If small rheophores are applied to the skin they should be moved about. This is less important with large rheophores.

9. If the patient needs the influence of any special medicine, it may be administered by dipping the positive sponges in a solution so as to have the current pass through it, or a slighter influence may be imparted by applying a strong solution on the skin and passing the current through it. The epigastrium is the best place for medical application.

10. If the Faradic current be used, it may be applied as a local stimulus by applying one pole on each shoulder at the site of Health, or by applying two poles near each other at any position needing stimulus. In doing this, however, a broad carbon rheophore is best, covered with wet cloth or leather—a broad sponge will answer the same purpose. A moderating rheophore is nec-

essary when the poles are near each other. The best material for which is carbon. The Galvanic currents may be used in the same way as a local stimulus by applying them near together with frequent interruptions. One of the rheophores may be used for this purpose by a rapid tapping or a gliding over the surface which produces the broken current that stimulates.

11. There is no current in electro-therapeutics at all comparable to the hygienic current from the hypochondria to the shoulder, and in applying this current, the negative pole may be applied not only to the site of Health, but over the entire upper half of the surface of the back, thus producing a great variety of tonic and restorative effects as shown by the map of Sarcognomy. Thus we may invigorate the brain, lungs, heart, liver and stomach, or administer general tonics as will be explained.

12. The hygienic region or upper portion of the back and of the occiput will generally restore pleasant and amiable feelings, especially in conjunction with the cheerfulness of the axilla, but whenever a positively amiable influence is needed we should treat the whole upper frontal surface of the chest, on which we develop the warmest sentiments of affection, duty and religion.

13. The reader will bear in mind that the effect of nervauric operations is materially enhanced by previously exciting impressibility at the lower end of the sternum, or in the temples an inch behind the brow.

CHAPTER VIII.

OPERATIVE METHODS.

Transmission of vital power. Proof by experiments on frogs. Failure of electrical experiments by eminent physiologists. Functions of the convolutions which they could not reach. My reasons for neglecting Galvanism. Medical opposition. Psycho-vital influences most appropriate to the brain. Discussion of the experiments of Fritzsch and Hitzig. How to begin experiments. Use of plasters and other agents. Familiar illustrations of Sarcogamy. Pathological illustrations. Initiating experiments. Vital emanations. Positive and negative poles. Evils and dangers of electricity. Relations of operator and patient. Necessary influences for the operator. Spiritual inspiration — its philosophy and power. Power of diagnosis. Prof. Draper's testimony as to the spirit. Conduct in the sick chamber — hygienic precautions. Dispersive manipulations. Non-conductors. Effect of passes. Quackery of massage. Activity in healing. Precautions for maintenance of health. Dangers of contagion.

In nervauric therapeutics we use every region of the brain and body for the production of physiological and therapeutic effects, and we rouse these regions by the application of the hand, which is their proper and congenial stimulus in the impressible constitution.

That the vital force and vital processes of one constitution should rouse similar processes in another is a proposition strongly resisted by most physiologists, notwithstanding their familiar knowledge of the transmission of pathological processes which reproduce exactly the same disease by their emanations.

There is an experiment on the limbs of frogs which might assist these sceptics to realize such transmission. If the frog galvanoscope is used by placing the nerve of the leg across the muscles of another frog's leg and then passing a feeble electric current through the nerves of the latter sufficient to convulse its muscles, the convulsive movement will also appear in the leg

which has its nerve resting upon the convulsed muscle. This is not simply due to a passage of electricity, for if a nonconductor, such as a thin plate of mica, be interposed between the second nerve and the first muscle, it does not prevent the convulsion, which shows that a convulsion in one muscle may transmit an influence which will convulse another muscle — an influence which is distinct from electricity, as it is not hindered by electric non-conductors (see Philos. Transactions, 1847 — p 231).

But it is not necessary to employ electricity at all; the muscles of a frog, a dog or a rabbit may be convulsed by irritating the spinal cord mechanically, and the frog nerve, if in contact with the convulsed muscle, will transfer the convulsive action to its own muscle, and it may be transmitted still further, so that a series of five or six nerves may be started into action by the first.

The same principle may be illustrated in man. If we contract firmly the flexor muscles which close the hand and bring our muscles into contact with those of a sensitive or impressible person who is passive, the emanating influence will gradually cause a contraction in the same muscles, which not being voluntary will not obey the will but will, pass off gradually.

This experiment illustrates the general law which has long been applied to healing, and which I have applied to experimental investigation — that all vital and psychic processes are transferable, as well as the pathological and the muscular.

In the European experiments on the brain, with electricity, the results have been extremely barren, not only because electricity is not the proper stimulant for psychic functions, but because the investigation was not conducted in a psychic spirit. As Althaus says, "although the induced current may penetrate to the brain it seems to exert only little influence on it, just as on the retina and other organs of special sense."

Longet entirely failed to produce muscular action by operating on either the white or the gray substance of the cerebral hemispheres by Galvanism or by mechanical and chemical irritation.

Weber, Majendie, Budge, Schiff, Matteucci and Van Deen all failed to produce any physical results in the body by Galvanic and

Faradic electricity applied to the hemispheres of the cerebrum and the cerebellum in an enormous number of experiments, and the sacrifice of a vast number of animals. The muscular system was reached in such experiments only by the motor nerves, the spinal cord and its commanding summit in the brain before its expansion is lost in the hemispheres, that is to say, in the medulla oblongata, the crura cerebri and the tubercula quadrigemina, which in animals are called the optic lobes, and which thus appear to be the summit of the muscular tract that responds by electricity; although we know that in vital action the volitional power that commands the muscles proceeds from the *corpora striata*, and that these are controlled by the higher organs of the brain. But electricity is so ill adapted to the higher processes of life that it produced no muscular response to these laborious and skillful experimenters above the tubercula quadrigemina.

What then were the functions in the hemispheres which would not respond to electricity? To this the only answer of vivisection was by ablation. Flourens, in an extensive series of operations on birds as well as mammalia, found that the functions in the hemispheres were those of psychic life — consciousness and volition, for consciousness, volition and all psychic operations whatever were completely abolished after ablation of the hemispheres, while animal life remained complete, and the animals remained in a state of unconsciousness as if asleep, although capable of swallowing food by reflex action through the nerves, when food was put in their mouths.

In these functions of conscious psychic life which modern physiologists with their rude mechanical conceptions have been unable to reach or evolve, lie the great majority of the operations which are interesting to humanity as the source of our weal or woe, and not only the source of joy or misery, but the source of physiological and pathological changes by an indirect influence on the body.

It is pitiable to see all the talent and learning of the present century failing after labors so prolonged and costly, and often cruel, to tell us anything important of the functions of the convoluted brain, in which lies the science of man — *a vast magazine*

of knowledge, destined hereafter to fill libraries with elaborate illustrations of that which collegiate science cannot even approach, because it disdains all psychic methods of investigation!

The failure of all investigations by electricity was due to the false philosophy which disqualified the inquirers. I have not found it impossible to excite and to reveal the functions of the brain by electrical methods. My first thought in this matter was to demonstrate the functions of the brain by Galvanism, but after a few such experiments, I found the psychic and nervauric influences of the human hand so far superior that, looking only to truth and to science, I hastily laid aside the electric method as inferior (a mistaken policy) and never returned to its use until recently, presuming in my optimism that intelligent men would not fail to appreciate nervauric experiments with the hand. But a gross mind does not appreciate simple, unpretending truth. My experiments before committees were entirely successful, but no sympathetic cord responded in the minds of spectators. A materialistic age demands materialistic methods, and if I had appealed, not to the reason, but to the senses, by an array of Galvanic batteries and harsh experiments on hospital patients, the demonstrations would not have come forth still-born, but resounded through the literature of the world, instead of meeting with immediate suppression. When the learned Dr. Samuel L. Forry announced at New York that my experiments were in their importance vastly superior to all that had been achieved by the most eminent physiologists, and the New York Medical and Surgical Journal which he established was ready to do justice to the subject, the peremptory threats of eminent physicians forbade its mention, and the death soon after of Dr. Forry deprived the truth of a champion — a position which Prof. Mitchell, after repeating my experiments successfully, was not disposed to assume,

I declined the use of the electric method, because that method is liable to evils and dangers from which the nervauric method is free, and because electricity is not commensurate with the psychic functions of life, although like other gross stimulants it may affect them, since it acts on the vaso motor nerves and secretions, and by

changing the blood supply affects the organs of the brain and is still better calculated to affect the brain, when in application to the body it stimulates regions to which the brain responds in sympathy.

The higher functions of the brain which are not in direct correlation with electricity are yet in close correlation with spiritual or ideal influences. A thought, or an external object which rouses a thought, will produce intense emotional action, which may produce violent excitement of the heart and muscles, and either greatly exalt or greatly depress the powers of life, or originate various forms of disease.

Psycho-vital power must be influenced by psycho-vital causes, and these are found in human beings whose psycho-vital force emanates from contact of the hand and from their entire personality. Hence the nervauric and psychic power must occupy a higher position in our therapeutics than the electric and the scientific manual or psychic healer will occupy a more and more honorable position as society advances.

The psycho-physiological influence of the hand is of universal application, and the hand is therefore the chief agent in therapeutic sarcognomy, although in many cases the psychic energy of the operator may reach and powerfully affect the patient with therapeutic influences, independent of physical contact.

I do not deny that delicate electric influences may safely modify the action of the organs of the brain, for these influences, like caloric, affect the circulation and nervauric conditions, and through these means the organic action may be modified, but not in the prompt, wholesome and natural manner which belongs to the hand, and which would authorize the general use or substitution of electricity in cerebral therapeutics.

The nervauric operator who aims to be a well qualified, scientific practitioner, should understand well the use of electricity as an important adjunct, and when in addition to this he understands the use of the *materia medica*, he may take rank as a complete physician and something more than a specialist.

Before proceeding further, I would ask is there any doubt thrown over my discoveries of over forty years standing, by the

more recent experiments of European vivisectors, of whose immense labors it would not be improper to say that the mountain in labor has brought forth a mouse.

I refer more especially to the experiments of Fritzch and Hitzig, who suppose they have discovered in the front lobes of dogs, muscular functions, although those functions are not in any degree affected by the loss of the front lobe.

Such investigations must be accepted in subordination to the well established and undeniable truth that the functions of the hemispheres are psychic, and that muscular excitability cannot be commanded above the tuberculæ quadrigemina. Fritzch and Hitzig's experiments are supposed to show that muscular powers are associated with the frontal portion of the brain, as they claim to have excited certain muscles of the neck and limbs by applying the electrodes at certain positions of the frontal convolutions — the details of which need not be discussed at present. Taking the experiments as stated by them, they do not imply that any muscular power exists in the frontal convulsions, for all direct nerve motors are capable of rousing the muscles under Galvanism after death, but the influence of the frontal convolutions ceased at death in their experiments.

As the frontal convolutions are known to be entirely psychic and their excision does not in the slightest degree impair the muscular power, it is evident that Fritzch and Hitzig only stimulated certain psychic functions, which are *associated* with the control of the muscular system. But we knew before that volitional impulses to certain muscles *originate* in the frontal or intellectual portion of the brain, and pass by the corpora striata to their destination. It is probable that the electric currents in their experiments affected the corpora striata by impinging upon the anterior expansion of the fibres of this striata, which would explain the different muscular effects they produced at different points, while the animal was alive, and their failure to produce any effects when they operated on posterior portions of the brain, not belonging to the radical expansion of the corpora striata. Their experiments are curious, but they do not disturb anything that we have hereto-

fore known of the physiological and psychological functions of the brain.

I see nothing in the modern experiments of Fritzch and Hitzig, Ferrier and others, which is at all contradictory to my own experiments. On the contrary I shall quote them as illustrative confirmations of my own experiments and discoveries. The movements produced by Dr. Ferrier were little else but the gestures of natural expression of the psychic faculties, easily explained by the laws of Pathognomy.

The nervauric healer should study very carefully his map of Sarcognomy, becoming familiar with the various localities, and should take every opportunity to verify them in the treatment of patients and in experiments on the well. A single person of highly impressible constitution would enable him to verify every locality and derive a large amount of instruction and entertainment from his experiments.

A faithful enquirer will have no difficulty in finding all I have found, and much more than has been stated in this volume.

To conduct the experiments properly, he should not select one accustomed to act as a passive Mesmeric subject or capable of being controlled by an assertion so as to believe himself whatever he is told. The subject of experiment for scientific investigation should be in the best mental condition of clearness of perception, correctness of judgement and independence of mind.

A very satisfactory mode of experimenting is to develope the local results independent of the personality of the operator, which may be done by heat and cold, by electricity or by stimulating plasters. Mild, gently stimulating capsicum plasters may be used — two inches by four, or three by six — or varied according to the object — and applied to the localities on each side of the body correspondingly. The effects may appear in five, ten or twenty minutes, and the application may be continued for an hour or hours, which will make the results more distinct and positive.

The continuous application of moderate warmth or of warm clothing upon any locality develops the local function, as the continuous application of cold depresses it.

All the effects which I thus produce by the hand, by local stimulation, by heat, or by electricity, have been experienced millions of times by intelligent people without attempting to look into their causation. They have been produced, also, millions of times in the practice of medicine without prompting physicians to look into the law of their occurrence, and every intelligent physician who reads these pages will find upon reflection that he has encountered many facts which illustrate the principles of Sarcognomy.

For example, who has not observed that antagonism between the head and feet which Sarcognomy explains — how coldness of the feet increases the determination to the brain, and excites wakefulness at night — how the warm bath to the feet relieves the brain and moderates fever, and how the heat and fatigue of the feet from overwork or prolonged walking deadens the action of the brain and reduces the mental power.

Who has not observed the dangerous effects of drafts of cold air striking the upper part of the back, depressing all the powers of life and endangering pneumonia or fever.

What physician is not familiar with the association between tenderness or pain at the lower end of the spinal vertebræ, and the pelvic diseases of women — or the prostrating influence of abdominal affections, and the hopeful influence of affections in the upper part of the chest, and the alarming anxiety and fear caused by affections of the heart.

The stimulation of the brain by a slight hyperemia of the lungs, or of the bronchial region, which I have often experienced, was utilized by a British member of Parliament (Mr. Dunscomb), by putting a stimulating plaster on his chest when he had to address the House.

Who has not observed the substantial energy of the whole constitution produced by warmly covering the lower limbs, and the debilitating, injurious effects of allowing them to be chilled.

What woman does not know how closely her bosom is associated with her affections, so as to compel her to exclude from familiarity therewith all but her child, her lover and husband; and

what physician does not know the very intimate sympathy between the womb and the female breast.

All these sympathies and associations, as well as others less familiarly known, are explained by Sarcognomy as illustrations of a general law which applies to *every part* of the body, and shows exactly the psychic and physiological association of every organ and every portion of the surface.

The full exposition of this subject is not designed in this manual, as it would require an investigation of the history of all diseases, showing the parallelism between the phenomena or symptoms of all diseases and the laws of Sarcognomy — such as we see illustrated in affections of the brain produced by pelvic disorders, and in the peculiar hopefulness of consumptive patients, while the disease is doing its fatal work in the upper portion of the lungs.

Such an investigation would interest the studious physician and philosophic inquirer, but the nervauric healer would find its pathological details less interesting than the experiments on his patients or friends, in which he finds an exact and ready illustration of scientific principles, free from irrelevant details.

Nervauric treatment by the hand proceeds upon the principle that the hand whenever applied has an adhesive or attractive and stimulating influence upon the spot, developing and exalting its vital powers. Thus the constitution of the patient is roused to effect its own renovation instead of passively receiving the vital force imparted by the healer, as in the ordinary treatment, in which the patient merely receives what the operator gives, and the latter is often exhausted.

The hand of the operator has an attractive power, which is both psychic and physiological, and consequently attracts to the spot where it is applied the vital forces of the patient.

The psychic attraction of the hand is easily ascertained upon sensitives. If the sensitive subject stands before you erect and at ease, the application of the hands for a moment on the forehead, followed by gently withdrawing them, will produce a tendency in the head to follow the retiring hand. I do not consider it any

objection to such facts that imagination may produce similar effects. The potentiality of tartar emetic is not refuted when we produce a similar nausea by imagination. In the majority of persons this would be imperceptible, but in the sensitives it is marked, and some will be so strongly attracted as to be unable to hold their place and compelled to advance. The most passive subjects will be entirely controlled and may be drawn down upon the floor.

The psychic attraction of the hand is also realized in our friendly salutations — the grasp of the hand being the expression of personal attraction or friendship. Mechanically the hand is also the instrument of adhesion, retention or holding.

At the foundation of such phenomena lies the fact that the vital forces, emanating from the brain and chest in voluntary actions and unconscious influences both physiological and psychic must emanate from the surface of the body, if like caloric and electricity they have a real existence. Of these emanations all can recognize caloric, and sensitive persons recognize electricity and psychic influences. For these psychic influences we have at present no instrument of detection but the nerves of the sensitive, and for electric emanations of a delicate character there was formerly no test but the nerves and muscles of the galvanoscopic frog. But the skill of Dubois Reymond and others has furnished instruments of sufficient delicacy to detect the delicate electric currents of living beings and ascertain that there are not only electric currents in motor nerves and muscles, but certain permanent currents in the body proceeding from its superior portions downwards, as they do in great quantity and power in the Gymnotus or electric eel, and Malapterurus or electric shad. These currents are the product of vitality, changing according to the degree of health and vigor, and cease at death.

These "strong and constant currents," as they are called, are not thermo-electric but vital, proceeding from the positive head and chest to the negative extremities — the palms of the hand and the soles of the feet.

The negative character of the palms of the hands qualifies them to perform the part which they have always performed in

my experiments — that of attracting and concentrating the vital forces and emanations of the subject, in which they coincide with the negative pole of the galvanic battery. Wherever I direct the hands to be applied for any purpose upon the body, the sponge of the negative pole of a weak galvanic current may be applied with similar results — in some respects coarser and more powerful and dangerous* as a concentrative stimulus, but substantially similar. In vital treatment there is more than the mere concentration of functions produced by negative electricity. There are emanations from the operator and absorptions of influence or general sympathy as in the old practice of animal magnetism.

It is true that in treating under the guidance of Sarcognomy,

* The powerful and even dangerous character of electric treatment may be inferred from its effects as stated by the best authors. Althaus says "The sparks from the common electrical machine applied to the skin of any part of the body produce a sensation of pricking and pain; if they are large the skin becomes red and a papular eruption, resembling lichen urticatus, is produced. If a continuous current be made to act upon the skin, a sensation of pricking and heat, redness, inflammation and sloughing of the skin and subjacent structures may be caused, provided the current be powerful and the application prolonged. A volta-Faradic current may produce sensations varying, according to its intensity, from a slight pricking to an acute burning pain; but although the tension of the current may be very high, it will not cause nutritive disturbances like the continuous current."

"If a continuous current of moderate power be directed to the skin for a short time, it dilates the blood vessels and promotes circulation, but if it be applied for several hours successively (as is often done with Pulvermacher's chains and galvanic belt) the blood vessels become paralyzed, and sloughs are produced. An induced current conveyed for a short time to the motor nerves and muscles rouses their vital energy; but, if its action be prolonged for an hour or more, the motor power of those organs becomes exhausted and temporary paralysis may be the result."

"Static electricity, electro-magnetism and magneto-electricity only affect that organ if applied so powerfully as to interfere with health and perhaps life; but a gentle, continuous current, directed to the face, scalp or neck, and which causes no or scarcely any, sensation of pain, is readily transmitted from those parts to the cerebral substance. * * * Sensations are caused by an application of the current to the head, which can only be owing to a direct action of it on the cerebral matter, viz.: dizziness, giddiness, sleepiness, sickness, faintness, vomiting and even convulsions. The latter phenomena are only noticed if the current be one of considerable power; but giddiness and faintness are often felt, even when a gentle current is used."

That electricity may be used in a safer and more congenial manner I do not doubt; but it needs important changes, both in electrical instruments and in the application of currents to render it entirely satisfactory.

the operator must part with a portion of his vital force to a constitution which is in a morbid state, but as he stimulates the healthy energies of the patient, the latter cooperates in the cure, and his cooperation relieves the operator. Thus if one by his combative-ness rouses the hostility of one assailed, their mutual violence stimulates each to the highest energy — or if one diffuses humor and boisterous mirth in a company, the mirthful response assists his own gayety, and he feels very differently from what he should if he addressed a solemn group without a smile in response.

To pour forth hope, joy, love or zeal to cold, unresponsive souls is an exhausting experiment, and to sit sympathetically in company with them produces more depression in ourselves than exaltation in them. The only way in which we can affect them beneficially without being injured is to go as a teacher or healer in the utmost tension of our powers, suppressing our impresible sympathy, while they are kept in a passive, receptive condition.

The patient to be passive should be in a sitting or lying position, the latter being better, and in the respectful, friendly, confiding state of mind which is necessary to his passive receptivity. The greater his reverence, love and faith toward his operator the better the result.

The operator should be in the full tension of his powers — in high health — full of courage, hope, zeal and joy. But he cannot maintain this state of mind which develops his highest pow-ers, under the most prevalent earthly influences. There is too much of difficulty, anxiety and doubt; too much of jealousy, selfishness and contention; too much of gloom and moral, as well as physical, malaria in the common experience of life to sustain the bright, joyous energy which should belong to the healer and the teacher.

True he may go forth on some beautiful day when the atmos-phere woos him with the bland warmth of its zephyrs and its well vitalized purity, when the flying clouds, the waving trees and the rich-tinted flowers pour into his soul a sense of the Divine beneficence flowing around him, and thus feel his better nature inspired and strengthened by an influx of joy, and hence I think the best

triumphs of nervauric healing are in warm climates or in summer weather, and in pure, well-warmed apartments, where the moral warmth of the society is equal to the physical warmth of the atmosphere.

But the limited amount of such inspiring environment, and the large amount of gloom and of cold, moral apathy, as well as malarious and negative* atmosphere, in many places, render it necessary to have some other source of supply than the prevalent physical and moral conditions in which civilized society exists to-day.

We need a grand and continuous inspiration; and though I am speaking now of the healer, what I say is equally applicable to every reader, for all need to be sustained in health and moral power for the performance of duty and enjoyment of life.

We need an unfailing, ever present inspiration.

WHENCE CAN IT COME?

and from what can it come? It must come from something which can inspire our hope, love, courage and heroism. That which is to inspire our love must be supremely lovely and noble — that which is to inspire hope must be the landscape of futurity, bright with the sunshine of joy — that which is to inspire courage is the certainty of ultimate conquest over all evils and opposition. Where can all this be found but in heaven? In the boundless spirit world we have an eternity of life triumphant over all evil conditions — not a far-off realm, dimly perceived by a hoodwinked faith — hoped for against doubt, grasped at with the energy of

* The atmosphere has positive inspiring conditions which vitalize the nervous system and invigorate all the secretions, and negative conditions which exhaust and depress vitality, injure the nervous system, check the secretions and aggravate every disease. Electricity and actinism are concerned in these conditions, but scientists have not investigated this subject. They have not been studied in their atmospheric relations to the human constitution, and my own duties have not allowed me time to give this subject a proper investigation. The healing and restorative influences come from the sun. Hence they are more abundant in southern breezes, but are also found in the North winds which blow over a dry and frozen but sunshiny region. They are deficient wherever the solar emanations are absorbed by thawing or by evaporation, and abundant when restored to the atmosphere by freezing or precipitation. The deadliest conditions exist in the absence of sunshine and prolonged evaporation and thawing.

dying despair, or enjoyed in passive melancholy, in the spirit of the poet who sings that,

"Love and hope and beauty's bloom
Are blossoms gathered for the tomb."

The Heaven to which we look for inspiration is neither remote nor shadowy, nor doubtful. Our friends and relatives and ancestors are there — he who is now writing these lines will be there in less than a score of years, and some who read them will be there still sooner, and if you would look upon life, dear reader, with a large conception of its realities, you would realize how short, how very short the distance between your present condition and the immortal hosts of higher spheres, who are soon to be your companions, and who are your companions now when your finer, interior senses can feel and realize their presence.

The healer should be inspired — as Jesus was inspired, and promised his followers that they attain a similar inspiration and do similar works. Anthropology shows that they who live the Heavenly life on earth do become inspired and become healers, teachers, reformers, uplifters for humanity, by their moral power and enthusiasm.

How does this inspiration reach us ! The method is simple and intelligible. The object that is capable of inspiring our love, uplifts, energies, and beautifies our whole nature.

Men and women are never so happy, so bright, so generous, so heroic as when inspired by mutual love, and happy are they who can find an enduring, faultless earthly love to be an inspiration through life. The bright and faultless objects of perfect love are to most of us discoverable only beyond the river. If we look among the angels we find a perfect love — either some one whom we loved on earth, or some one who has risen to the sublime heights of love and wisdom by centuries of progress, Christendom finds its saints for love and adoration in the Bible, and some are well worthy of Divine love. But whether our love, or our adoration, which is the intensity of love, be given to Jesus or St. John, or Mary, the mother — or any of the army of saints from Moses to Joan of Arc, or from Joan of Arc to Washington, *the profound*

conviction of the nobility and loveliness of that which we adore is what calls out our love, and gives our inspiration. Even if Jesus and Mary had been myths, the faith in their reality would have made them the inspiring power of Christendom, but being realities there was not only this inspiring power, but the inspiring influence of their actual spiritual existence. He whose best conceptions and spiritual capacities have been depressed by the physical wants and struggles of human life below the plane of being on which we can realize the supernal, should endeavor to substitute for confiding faith the power of a vivid imagination, forming grand ideals in his own mind, or allowing them to be evolved by romantic fiction and poetry.

The worship of Jesus was not absurd — it was an adoring love for the qualities represented by him. The worship of Mary and of all the true Saints was not absurd. It was a wholesome and inspiring *love of virtues*, idealized in them. Worship often begins for men with the adoration of some true, noble and gifted woman, whose worship deepens as she rises in the spheres, and this was the worship enjoyed by Auguste Compte after he had lost sight of supernal truth.

Beyond all these is the love and worship of the ineffable Divine, which no more interferes with or affects other loves than the love for the mother forbids love for her child. On the contrary, saintly love is the complement of Divine love, and both are the inspiration of that earthly love which extends to every brother, however unworthy he may be. Love on the earth plane is too often an unsatisfactory and thankless love, and is in danger of perishing in the cold, unless sustained by the warmth of Divine and Saintly love, in which we approach something higher than self and are strengthened and ennobled thereby. For want of this how many a soul of noble powers, blind to the eternal beauty, has sunk into bitter misanthropy and scorn of all mankind.

It is evident then that the supernal world calls forth our love by its loveliness, our reverence by its grandeur — our hope by its assurance of happy immortality, and our courage by the assurance

that we are not perishing worms of the dust, but partakers of a Divine immortal nature which cannot be crushed.

Inspired thus with the nobler emotions, the healer is brought into sympathy with the supernal love, and as *identity of condition implies sympathetic union*, he becomes actually inspired by the grand spiritual presence which from higher spheres flows into all who ascend to meet it. It may not be consciously, it may be simply an unconscious portion of his spiritual life, as all inspired sentiments are — as Ole Bull said that his music was inspired by the mountains of Norway, and Byron said "high mountains are to me a feeling."

But when the nervous temperament is favorable — when certain anterior interior parts of the brain are well developed, the spiritual power is not merely an unperceived support, but becomes an actual presence, and the attending, inspiring or controlling spirit adds his power to that of a healing medium so generously as to relieve the latter of the burden, to give the intuitive diagnosis of disease, and to perform the healing work in giving spiritual vitality, which is so much more perfect, enduring and inexhaustible in the spiritual spheres — the infinite sea of life.

Aided in this manner, the healer does marvelous works both in diagnosis and in healing, and the advent of this form of practice now, when materialistic philosophy has built up a mass of *physical science* concerning living bodies which rises like a Tower of Babel vainly seeking the skies, but which ever fails in exact diagnosis,* and truthful prognosis in difficult cases and fails so often in therapeutic practice — the advent, I say, of a higher form of practice in which spiritual power is concerned, demonstrates the blundering folly and laborious disappointment of human life in the scientific as well as the practical, when alienated from the

* Dr. Taft, who recently died at Hartford, Conn., was pronounced at the beginning of his professional life, by Dr. Willard Parker, incapable of living over six months, because one of his lungs was about gone; which opinion being confirmed by a leading Boston physician was universally accepted. Nevertheless, he lived to the age of sixty-four, and the autopsy astonished the doctors by revealing a pair of sound lungs.

supernal and Spiritual — and the glorious elevation of every department of life when man is brought into nearer relations to the Divine.

The learned and eloquent Prof. Draper was the only physiologist of eminence who realized the necessity of rising above physical science into the spiritual sphere for that of which the colleges know nothing, which he expressed as follows, in his able text book of human physiology. "We have precisely the same reason for believing the existence of the immortal spirit that we have for knowing that there is an external world. The two facts are of the same order. Of the future continuance of that external world irrespective of ourselves we entertain no doubt; indeed, in certain cases, as in those presented by astronomy, we are able to tell its state a thousand years hence. So long as our attention was *confined to statical physiology* everything connected with the subject now under consideration was enveloped in darkness, but it will be very different when dynamical physiology begins to be cultivated — dynamical physiology which speaks of the course of life, of organs, individuals and races, * * * and then it will appear that the universal opinion of the ages and nations is not a vulgar illusion, but a solemn philosophical fact." It is to this dynamical physiology that I have given my life, and in which I have found the philosophy of the healing art. In a coming century the colleges will begin to learn its importance and know that the existence and operation of the soul are "not a vulgar illusion."

Hoping that the healer has attained the plane of true life and overflowing health which is beneficial to all who approach him, I would then caution him so to maintain his powers as to preserve his own health and efficiency.

In the first place he should never enter the sick chamber in a hungry, thirsty or enfeebled condition, or when exhausted by treating patients or the cares of business, for in such conditions he is predisposed to absorb the malaria of the sick chamber and the nervauric emanations of the patient, and has less power as a healer.

He should not expose himself to the physical emanations of the patient, no matter what his condition, for it will require all his energy to resist the vital pathological emanations that impress his

sympathetic faculties. He should not breathe the air charged with the respiration and cutaneous emanations of the sick, but should have the chamber thoroughly ventilated before he enters it or have the patient brought into another apartment, and if there is a current of air should be on the windward side of the patient.

The best precaution for both patient and healer is to destroy the malaria of human transpiration and household emanations of various kinds by ozone. No costly apparatus is necessary. A small piece of phosphorus placed in a soup plate or saucer of water will slowly generate ozone enough to purify the air of an apartment. When we wish to increase the amount of ozone, we expose the phosphorus, by tilting the plate or diminishing the amount of water, and when we wish to diminish the ozone we cover the phosphorus with water. The emanations of mint, thyme, cedar and pine and most of the odorous oils have in some degree a similar purifying influence upon the air — none perhaps better than thymol.

In malarious localities, or in houses of imperfect plumbing and drainage, these precautions are very important. The best labors of the healer may be defeated by the insidious influence of impure air.

Ozone is the natural purifier of the atmosphere, to which it owes its freshness in the forest and mountain heights. It is generated by atmospheric electricity, and may be produced in our apartments by machines for frictional electricity. It may also be generated extensively by a mixture of three parts of sulphuric acid and two of the permanganate of potash.

A plethoric condition of blood vessels is one of the essential conditions of health for all human beings and for animals. The less blood we have the more easily is our vital power exhausted, the more feeble and irritable are the nerves, and the more liable are we to inflammations, colds, fevers and every other form of disease.

Abundant nourishment is especially necessary to the healer, and when attending feeble, emancipated patients, he finds it necessary to eat much more than his ordinary allowance to generate

vital conditions for his patients as well as himself. It would seem mysterious or incredible to the disciples of the materialistic physiology, which prevails to-day, that without muscular fatigue or any special evacuation, the mere contact of the hands of the healer with his patient sometimes produces an exhaustion which requires to be supplied with food, and enables him to eat and drink more freely, as if he had been engaged in severe labor. But such is the fact, as I have personally experienced, and it proves that food is the means of supplying something more than mere organized matter — something which may be lost by vital transmission and radiation.

In the hungry condition, just before meals, the healer should abstain from treating his patients. His diet should be liberal and nourishing (adapted to his own constitution) and a cup of tea or coffee will often add much to his operative power and resistance to disease. In any difficult case he should use some congenial stimulus to exalt his powers and resist contagion. Absorption does not occur to any material extent when the blood vessels are very plethoric — hence the free use of liquids, especially such as are of stimulating and tonic qualities, gives great protection against morbid contagions.

When any particular form of disease is prevalent, the healer would find it beneficial to use for himself a sa prophylactic the remedies which that disease requires. In a malarious atmosphere for example two or three grains of dextro quinine taken daily could give him a protection. In some cases he would even find it expedient to take himself the remedy the patient needs, for his own protection, or even to take enough to charge his constitution with its influence and give the influence to the patient by contact.

Patients may be treated to any extent by external application on the skin of the remedies which they require, and if the operator should apply the required remedies on his hands, he would also find *that* a pleasant mode of making the required medical impression. The advantage of this course in swallowing the remedies or using them on the hands is the protection it gives the healer and its genial influence on the patient.

The healer should avoid the atmosphere of disease. His office shoud be *very freely* ventilated, and in visiting the sick chamber he should have it ventilated before he enters, and should not remain too long ; but above all *he should not remain in a passive condition*, but should remain on his feet, either engaged in conversation and giving directions or in active manipulations upon the patient.

The first thing to be done in almost all cases is to make *dispersive manipulations* on the seat of pain or disease. The nervaura of the human body is not an imaginary thing ; it is radiated and conducted in every direction ; and when the clothing and atmosphere are in a very conductive condition, exhaustion is produced as in a moist atmosphere. The bracing effect of a dry non-conductive atmosphere is well known. Metals are good conductors, and many a poor sewing woman has had her health seriously impaired by the metalic foot-piece with which she works her machine ; many a writer has had his fingers and writing capacity impaired by the metal instrument used in writing, which would not have occurred if he had used the goose-quill, or a rubber, gutta percha, cork or wooden penholder.

Non-conductors are necessary for our protection. Woollen and silk garments retain the vital conditions and produce a happy effect, different from that of cotton. Linen as the best conductor is objectionable in personal clothing on account of its conductivity.

The retention of nervaura in the brain by a silk cap has proved very beneficial in impairment of brain power, and the use of silk and woollen clothing is very beneficial to the nervauric healer.

That the nervaura may be beneficially retained or wastefully lost by our clothing is an evidence of its substantial reality, and every sensitive can feel its emanation from the hands and the various emanations from different parts of the body.

In disease and pain we may proceed upon the theory that the nervaura of the morbid part is morbid, and should be removed. We frequently find that in manipulating upon the seat of pain, the pain seems to be propelled in the direction of our passes, and if not

dispersed or scattered, moves along the limb, until at the extremity it departs. The first thing to be done, then, is to make dispersive passes lightly and rapidly to remove the morbid aura, after which the application of the hand produces a wholesome effect.

The nervaura of the operator's hand applied to the passive patient, all over the person, by gentle passes, or by gentle percusion, is a soothing, restorative influence, tending to resist the waste of tissues and vital forces, to diminish fever and excitement, and to promote nutrition and sleep.

In addition to these effects, it imparts the vital qualities of the operator's constitution, and if he be well supplied with health, benevolence and vital force, gives an increment of these to the patient. Hence, a great deal of good has been done in this way in the practice of what is called animal magnetism, and the perception of the benefits produced by magnetizers has led the materialistic medical profession to attempt an imitation in their own clumsy, mechanical way, which they call *massage*.

If the blundering and ignorant practice of any art in disregard of accumulated knowledge is entitled to be called quackery, massage is a conspicuous example of quackery.

Ignoring all the wonderful cures made by magnetic healers; ignoring their experimental knowledge and practical directions, which have been so long published and so successfully acted on; ignoring the very existence of psycho-nervous influences and emanations, physicians demand a class of ignorant subordinates, mechanical rubbers, who operate blindly and often injuriously as well as inefficiently. The ignorance of the *massage* is not compensated by intelligence in the physician, for the latter, if faithful to the dicta and prejudices of his college and clique, has kept himself in willful ignorance. Nevertheless, the rubber, if intelligent, will soon find that he produces effects which physicians do not understand, and if honest in attempting to comprehend the treatment, he will learn something of what has been known as animal magnetism, and borrow from that something to render massage more beneficial. His healing skill will then be acceptable, cloaked under the name of *massage*. But I should be sorry to see

any magnetic healer for the sake of physicians' patronage concealing his artistic skill under the delusive and vulgar title of massage.

Manual treatment consists in first, dispersive passes on morbid parts; second, charging the system with the nervaura of the operator; third, stimulating organs by contact and percussion; fourth, changing the vital balance of functions by dispersing from one spot to accumulate at another.

Excitement accumulated at one spot may be dispersed by dispersive passes with the hand, by positive currents of electricity, and by sponging the surface with warm or hot water.

Excitement may be concentrated to any spot by the application of the hands, by the negative pole of the battery, by the application of dry heat, and by stimulating plasters.

By these simple measures we call forth and regulate all the vital forces, rousing lungs, liver, stomach, bowels, kidneys, and the muscular system, and producing all the mental conditions necessary to cooperate in the treatment, when we understand the locations presented by Sarcognomy.

The advantage of treating the constitution locally according to Sarcognomy is that by this method the energies of the patient are specifically roused to aid in the treatment. There are certain controlling forces which when roused improve the condition of the entire constitution and respond to the purpose of the healer.

Thus as the operator stimulates each organ he rouses a beneficial response, and is not exhausted. If he stimulates the region of Health he finds a healthful influence returning, which he enjoys and perceives in most cases by his sympathy.

To call out this reaction and stimulate the constitution of the patient to recovery, as it is stimulated by appropriate medicines, without exhausting the operator, he should not only know exactly what faculties and organs to rouse, but should rouse them actively, instead of passively. If he places himself in an entirely passive and sympathetic condition, with his hands resting on his patient, he absorbs the emanations of the latter, and becomes to some extent the victim of the contagion, so that his health is gradually

undermined. Instead of the operator diffusing health, it is sometimes the patient diffusing disease.

By the active methods which I have recommended the operator repels the influence of disease, and by the knowledge of Sarcognomy he is enabled to produce the exact effect that is desired, which might be utterly impossible by any general operation, as when, for example, in a patient suffering from melancholy and hysterical conditions, cheerfulness and tranquillity are restored by placing the hands immediately under the arms.

But with all these precautions a sensitive healer will gradually absorb morbid influences from contact, sympathy, emanations and the breath of his patient, and needs to be continually guarded. I hope these warnings will not be neglected, but I know that physicians and healers habitually neglect themselves, and the approach of morbid conditions is so gentle and insidious that they take no alarm and find themselves ill unawares. The only safe rule is to demand for ourselves complete, exuberant health at all times, and if there is any decline from that, to look into the cause at once, and remove it.

The precaution of washing the hands immediately after a treatment is a great safe-guard, but where there is not much of the morbid influence each hand may be rapidly brushed by the other. If any medical or morbid influence enters by the arms, passes down the arms and hands may remove it, and after treating a patient a friend may remove from our constitution the deleterious influence by such passes, or we may make them ourselves.

A still more complete method is, after brushing the hands that have been on the sick, to place them on the well. Select some vigorous, healthy person, and place the hands for a few minutes on his shoulders, about the middle of the shoulder blade. This is the centre of health, and, if such a precaution were regularly observed, the healer instead of losing health by treatment might actually gain. This is the method which should be adopted in the prolonged treatment of a difficult case. The operator should have magazines of health at hand, and draw upon them freely. But

there are some born healers who for many hours increase in power as they relieve the sick, developing their own vitality or drawing from their inspiration.

Another method which may be adopted in treating difficult cases is to have a healthful and vigorous person cooperate by placing his hands on our shoulders on the region of Health, and thus giving a sustaining power to resist and conquer morbid conditions.

I cannot impress too strongly on persons of a sensitive temperament the necessity of protecting themselves from morbid emanations. True there are some whose vital energy and will enable them to repel morbid influences, but there are millions who are unconsciously injured; and the medical profession has greatly increased the disease and mortality from such causes by its *stolid materialism*, and unwillingness to recognize contagion through the nervous system. My own experience has been quite decisive, as my most serious disturbances of health have come from contact with the sick, and I have on that account never been able to devote much time to the practice of medicine. In Italy contagion is so fully realized by the people that it is not uncommon to destroy everything in the room in which a consumptive has died. In England and America contagion is not understood. A family in Ohio, twenty-five years ago, were importuned by a consumptive in the last stages of life to take him into their house to die, and complied with his wishes, unconscious of danger. Their daughter waited on him until she became so sick she was forced to go away, and became a patient with similar symptoms. She had a strong constitution, but gradually emaciated, losing nearly forty pounds, under the consumptive cough, which has continued twenty-five years in spite of all that could be done, until in despair she called upon me, emaciated and feeble, for medical treatment. Had the family known the transmissibility of disease this misfortune might have been avoided.

CHAPTER IX.

NERVAURIC THERAPEUTICS.

Impressibility the first question—its various external indications and causes. Influence of love. Improvement at the critical period of life. Test by the hand. Test by the eye. The receptive or impressible condition. The use of medicines. Impressible region of body. Passive and active methods. Influence of warmth, food and medicine. Virtue the best foundation. Four controlling powers—health, brain power, vital force, sexual developement. The shoulder. Plan of the human constitution. Parallelism of the spiritual faculties operating through the brain, and the physical powers displayed in the body. The psycho-dynamic health power—why at the shoulder—its proximity to the life centres—its connection with the spinal centre of power and ethical region of chest—its approbative character—relation to intercostal nerves. The foundation of Sarcognomy. Importance of shoulder exercises. The shoulder as a regulating region and centre. Treatment on the back. Narrow and exclusive views deprecated. Back to back practice. Fantastic theories and unscientific methods. Narrowness and prejudice. Importance of protecting the shoulders and back. Nature protects the vital regions of head and body.

IN approaching a new patient the first question is whether his impressibility is sufficient to give a satisfactory response to our efforts, or whether he has the coarse, immovable temperament on which refined influences are wasted, and which we should willingly resign to the heroic treatment of cathartics, emetics, stimulants, narcotics, epipastics and sudorfics.

The general appearance will generally be sufficient for those who have intuitive perceptions, but there are distinct indications in the delicacy of the skin, and the general refinement and softness of the person, no less than in the cranial configuration. The predominance of the brain in front of the ear assures us that its faculties are better adapted to receiving and appreciating impressions than to reaction and resistance.

All the anterior organs promote impressibility as all the poste-

rior resist it, but we are specially interested now in only one kind of impressibility, not the impressibility of the intellectual organs of the forehead, which receive knowledge through the senses and are therefore influenced by ideas — nor that of the genial and benevolent sentiments which respond to human worth and energy, but the impressibility which yields to subtle influences, to the subtle emanations of the nervous system.

This impressibility is associated with the breadth of the head at the temples, especially at the anterior part of that region of sensibility which I discovered in 1837 - 38 and which has been forcibly illustrated by Prof. Ferrier, in the cruel experiment on the brain of a monkey.

This region of Sensibility, at the basis of the middle lobe, extends from the back of the eye sockets along and above the cheek bone to about an inch in front of the cavity of the ear. Its large developement gives us acute sensibility to every thing that can affect our senses, and the more anterior portion of the organ, possessing the more delicate and refined sensibilities, feels the influences that emanate from vital processes, and therefore is affected by them — hence it may be properly called the organ of impressibility, above and anterior to which is the region of Dreaming and Somnambulism, an inch behind the external angle of the brow.

Breadth of this region is the best indication of impressibility, but delicate impressibility may exist without the breadth, for the organs which give breadth to the temples, are concurrents or coincidents of analagous organs at the median line, on the same level, adjacent to the falx (separating the hemispheres) which may produce delicate forms of impressibility and intuition without giving breadth.

Moreover, impressibility may arise from a frontal temperament, produced not by large frontal organs but by the predominance of the front over a feeble occiput, and by a frontal life. As the predominance of the animal impulses in the mind and temperament may be produced by living a turbulent animal life among coarse

associates, so a predominance of frontal qualities and frontal temperament may be produced by living according to the inclinations of the frontal organs — a quiet, amiable, indolent but unselfish life — a sedentary life of delicacy, refinement and social harmony — the effect of which we recognize in the general appearance.

The proud, heroic and combative elements of character are antagonistic to this impressibility and tend to destroy it. Hence we do not find a great deal of it among the avaricious and jealous competitors for the highest rank and power. There is far more among the humbler classes, whose selfish passions have not grown strong by indulgence, and whose self esteem does not interfere with a reverential esteem for superiority. It is far more abundant, too, among women in whom the hostile combative elements are generally kept in check, and who live generally under the refining (frontal) influences of home.

Moreover, Impressibility is especially favored by love, the exalted emotion which dominates over the life of woman as it does not over the life of man; for love tends strongly to that intimate sympathy, unity and responsiveness which occur through Impressibility. (The modus operandi of this belongs to the psychic study of the organs of the brain.)

Hence the most perfect and interesting exhibitions of Impressibility occur among the most lovely and charming people. It is perhaps never absent when the sexual developement first matures in young women. The period of refinement, romance, beauty and poetic sentiment, when girlhood verges into womanhood is the period of great impressibility, during which the magnetic touch of a mother or friend is competent to regulate all the delicate machinery of life, to ward off incipient disease, and guide the normal development of body and soul. But, alas, it is too often a period of mismanagement by the ignorance of the family and sometimes by the coarse blundering of drug practitioners, ignorant alike of the soul and the laws of its tenement — knowing only a scanty number of coarse medicaments, and reluctant to increase their number.

It is here that Therapeutic Sarcognomy will show its vast and

benificent power by making this transitional period not one of nervous disorder, habitual languor and general inefficiency, or the initial period of grave and life-long diseases, but a period of mental brightness, for activity and developement into permanent health and usefulness, whence a long line of noble posterity.

It must not be supposed that the strong and hardy elements of character are incompatible with impressibility, because they antagonize it. The first individual in whom I discovered the extreme range of the sensitive faculties, Bishop Polk, was a man of strong character, and became a general in the Confederate army, in which he lost his life.

In addition to the indications of Impressibility in temperament, sex, habits, education and cranial developement, we may observe indications in the face. A large eye with a *large pupil*, and a fullness or prominence of the cheeks around the eyes, with a rosy tint, are valuable indications, to which we may add a fullness of the upper chest, of the female bosom, and of the region at the lower end of the sternum.

But we may easily make a satisfactory test with the hands. Let the patient extend his hand horizontally, with the palm up, while we make a pass over it, the tips of our fingers coming within an inch of the surface of his hand. If merely sensitive, he will recognize the warmth of our hands and possibly a slight, very slight tingling or pricking effect. But if impressible, the nervauric emanation from the fingers will produce a slightly cooling sensation, similar to that from a very gentle breeze.

The individual in whom this occurs will prove impressible to the influence of the hand, and in many cases will yield so readily to nervauric treatment as to make the cure of his diseases a pleasure.

To illustrate farther the degree of impressibility, we may touch the locality in the temples an inch behind the external angle of the brow, where we find Impressibility and Somnolence. While touching this locality on each side, a calm, dreamy feeling is produced in the subject, making him indifferent to surrounding objects and presently producing a disposition to close the eyes. The

upper eyelids droop, quiver and wink, and gradually incline to remain closed. In the extremely impressible they will be closed so firmly as to resist the effort to open them.

The whole constitution is now in its most ductile or receptive condition, and nervauric treatment is sufficient for all its diseases. Yet the scientific operator who is familiar with the real value of medicines will still find it expedient to employ their assistance in accelerating and perfecting the cure, for medicines wisely adapted to the case are as congenial and wholesome as our common food. There is, indeed, no dividing line between food and medicine. What is commonly called food is the medicine for the hunger, thirst and exhaustion caused by exertion and exposure. What is called medicine is the food for constitutions more than exhausted by adverse influences. Ferruginous and phosphoric preparations are the food for organs affected by degenerate or deglobulized blood. The coffee and wine which rouse from the prostration by heat and unwholesome air are as medical, only in a milder degree, as the quinine that resists malaria, and the whiskey which saves the prostrated victim from the effect of the rattle-snake's venom.

As the object of the healer is success in controlling the constitution of his patient to remove his diseases, it is proper that he should aim to increase and maintain the impressibility upon which his success depends. Hence, if he initiates his operations by touching the temples until the eyes display the effect, he facilitates his subsequent labors.

I think it preferable, however, to produce the impressible condition on the corresponding sensitive and somnolent region of the body by placing the hand on the lower part of the chest, just below the sternum (breast-bone).

This operation, though not invigorating, is very valuable, as it produces a rather pleasant, passive tranquillity, especially as the patient should be lying down when it is attempted, which is indeed the best position for all therapeutic operations.

In consequence of the susceptibility thus established, the patient feels the entire influence of his healer by coming into com-

plete sympathy with him. The hand conveys his entire personality, and this operation alone would in many cases work curative results by subordinating the morbid constitution of the patient to the healthy constitution of the healer—producing by this simple operation results which the practitioners of animal magnetism aim to attain by a great variety of passes.

While I would recommend this initial process for the subdual of the patient, I must qualify the recommendation by the suggestion that it may sometimes be objectionable, for while it increases the susceptibility of the subject it tends also to increase that of the operator, and by his passive condition to make him receptive of the morbid influences of the patient. When these influences from a strong or extremely morbid constitution are too strong, the operator should not assume this passive condition. He may conduct the operation more actively as by a gentle patting or tapping operation* and produce the same effect as by the mere application of the hand.

What other influences it may be asked will increase the susceptibility. Warmth will contribute much; it draws the circulation to the surface, increases the susceptibility, and if carried far, diminishes the muscular energy (which belongs to the occipital or resisting region and antagonizes the amiable elements). Hence warm climates have more than twice the susceptibility of the cold, and the nervauric healer who would win the greatest and most pleasant triumphs should visit the tropical regions, in which he will find almost the entire population subject to his power. In Mexico and South America the results will be far more brilliant than in the United States.

For this reason impressibility is greater in summer than in winter, and in warm apartments than in cold ones.

But the moral warmth is as necessary as the physical, and

* The late Dr. W. McDowell (the first writer upon consumption who developed its philosophy and rational treatment as far back as 1840) told me that an overseer in Virginia was accustomed to make a wager that he could put any one to sleep by force. To do this he would have the man seized by assistants and thrown upon his back on the barn floor, where he was held while the operator, by a steady and gentle patting on the epigastric region, would put him to sleep.

families ruled by love and harmony will not fail to develop susceptibility. Music also greatly promotes it, especially vocal music — so does the contemplation of beauty in nature or art, and habits of contemplation. There is a great deal of difference between the fashionable music which is a mere combination of force and skill, and the music of feeling like that of the Scotch which has the best influence.

Diseases of an acute, active character generally promote susceptibility, and increase the sensitiveness to remedies, which explains the success of the infinitesimal homœopathic remedies, nicely adapted to the disordered organ. Yet many chronic diseases in which the nervous system is impaired rather diminish the susceptibility.

The influence of food and medicine upon susceptibility is worthy of attention. The sensitiveness and irritability of the nerves is increased by a low diet. Animal food tends to muscular developement, which is antagonistic to the refining elements; vegetable food and fruits are more appropriate for the frontal and superior regions of the brain. Flesh diet and articles difficult of digestion antagonize impressibility, but articles which gently stimulate the frontal organs favor it.

Coffee, tea and tobacco promote susceptibility, although their excessive use impairs the health, and medicines of the anodyne or nervine class have a tendency to promote it. There are many articles, such as coca, lavender, valerian, cypripedium, vanilla, etc., which, by their tonic and restorative influence, are beneficial to the nervous system, and thus indirectly promote a healthy susceptibility.

I think it will ultimately be realized that the predominance of virtue and refinement is the best foundation for impressibility, and I doubt not that in "the good time coming" when humanity shall have attained a nobler developement, our entire population, even in cold climates, will become amenable to nervauric healing, and the aggregate vital power of society will sustain each individual against infirmity and disease by an all embracing sympathy and friendship.

FOUR CONTROLLING POWERS.—The perfect developement of the constitution into health and efficiency depends mainly upon four localities, in which the vital forces are concentrated, which may be called the regions of

PERFECT HEALTH,
BRAIN POWER,
VITAL FORCE, AND
SEXUAL DEVELOPEMENT.

The region of perfect health or normal perfection is at the shoulder blades or superior posterior region of the chest.

This discovery carries us far away from all the crude philosophies and speculations of biologists. It is so great a departure from all pre-existing conceptions as to require some explanation to make it clearly intelligible to a philosophic enquirer.

Through long familiarity, the new philosophy has become to me a familiar and simple view of life, but in sympathizing with one who dwells in the old forms of scientific thought, I perceive the necessity of giving an explanation of this new view of the constitution of man. I do not wish the therapeutic practitioner to know only the manual of treatment and the localities he must rouse, without understanding as well as practicable the plan and philosophy of the human constitution, which control his operations.

The fundamental plan is this, that every function of human life has a distinct local apparatus. There is no organ without a function, and no function without an organ. If we could determine *a priori* the functions of life we should know what organs must exist. But the *a priori* method has always been a failure and delusion. We know nothing without observation and experiment. The existence of such a science as Sarcognomy has never been realized or ever imagined in human speculation, and the speculations of the metaphysicians have only intensified ignorance of the constitution of man.

But this statement of functions and organs gives only a very limited glimpse of the truth; we find in the body a great many structures for the special purposes of physical existence, and in the brain a great many structures for the purposes of our spiritual

existence. The brain powers are omni-relative — they face all possible aspects or relations of life, and qualify for all possible duties. They have no mechanical or limited character, and do not resemble the mechanical and limited functions of the body. Nevertheless, they control and inspire the body, wielding all its powers for their own purposes, and although there is so wide a difference between the genial and spiritual powers connected with the brain, and the special physical powers of the body, there is yet established by Infinite wisdom a wonderful parallelism, unity, consociation and cooperation, as if one were the echo of the other — not by any arbitrary decree and inscrutable fixedness of order, but by a marvelous unity of purpose, and practical cooperation which enables us to find for every part of the brain a corresponding part of the body, with which it sympathizes, and cooperates in health and in sickness, the details of which cooperation are revealed in Sarcognomy, the science which shows the marvelous adaptation of all physical structures (apparently only for physical purposes), to sustain, obey and unitize with the grand spiritual powers which in man typify the Supreme Creator.

The spiritual or psycho-dynamic power or faculty which we do not define but only suggest when we use the word health, is in the psychic sense the centre of our impulses, energies and affections, so related that in its action it calls forth a harmonious combination of sustaining, impelling and regulating powers, as has been already explained in the chapters on health and the spinal system.

Why is this power manifested in the shoulder and why is the shoulder a suitable location for a response to the spiritual faculty of Healthy Animation.

The middle of the shoulder is adjacent to the great life centre in the chest, where the influx that sustains physical life by oxygen is in continual progress, and the efflux that bears vital conditions and nourishment to every organ of the body from the heart is also in continual progress, and the extent of these two processes is nearly a correct measure of the amount of physiological life, evolved in the body. The large development of that region, and

consequently of the posterior part of the chest, necessarily implies an abundance of vital action. Moreover the shoulder as distinguished from the chest is an appanage of the cephalic region of the spinal cord, in which as heretofore explained, is found the maximum vital power, and it covers the distribution of nerves from the cephalic region of the cord, which forms the brachial plexus, and gives the arms all their power. The shoulder stands between the spinal origin and the muscular and cutaneous distribution of these nerves, and the posterior or scapular region of the shoulder receives its (sub and supra-scapular) nerves from the brachial plexus.

Thus the scapular region is associated with the highest vital elements of lungs, heart, spine and arms, and its developement must indicate both power and activity. But in addition to this, the shoulder has an ethical character, derived from its proximity to and connection with the summit of the lungs and the corresponding portion of the spine. The summit of the lungs is an ethical region, the region that sympathizes with the superior aspect of the brain, the region of the virtues, and gives the upward determination to the vital forces. It is well-known and often expressed in emotional language that the bosom responds to or is agitated by the higher emotions.

Thus the shoulder in addition to its energies is associated with the kindly emotions and responsive to the love which belongs to the mammary region of the chest. The faculty of healthy animation, in the brain region to which the shoulder region corresponds is the faculty which attracts affection by its abundant and harmonious exuberance of life and which craves and wins love, which it seeks with approbative zeal. The word approbativeness is indeed an appropriate name for it, for it desires to be loved and continually seeks not applause but affection.

The adjacent organ however is called Approbativeness because it especially seeks approval, sympathy and admiration.

This health region on the scapula is on the line of the intercostal nerves which from the upper dorsal region (its first five vertebræ) extend around the summit of the chest, supplying its integuments and the intercostal muscles — the integuments of the

amiable region and the muscles of inspiration for the expansion of the upper part of the chest. As the anterior part of the trunk like the anterior part of the brain is distinguished by impressional sensibility, while the spine represents reactive energy, the middle of the scapula represents rather more of the impressional capability (which is necessary to the amiable character) than the spinal region, while it also represents the general benevolent or virtuous influence of the summit of the chest and brain.

Let us return now to practical therapeutic sarcognomy, for a complete demonstration of the *rationale* and *modus operandi* of the functions of life is not designed in this volume, and this *partial* illustration of one function is designed only to show the reader that sarcognomy stands upon solid scientific foundations in anatomy as well as psychology, and is neither a matter of analogy and correspondence suggested by ingenious speculation, nor a crude result of careless experiments, but has been evolved by careful experiments guided by philosophic principles, and has been confirmed still farther during the last forty years by the test of its practical success in guiding the treatment of the sick. -

As we find the centre of normal life or healthy energy in the shoulder — the centre which happily combines the pleasing, honorable and attractive elements with physical efficiency, longevity and conquest of disease, it follows that shoulder development should be a part of hygiene that lifting, rowing, fencing, handling weights, swinging on the arms and other suitable exercises should be prescribed as an aid to our treatment, and that in the treatment, the leading prominence should be given to shoulder methods.

Thus in treating the various organs, we may keep one hand on Health, while stimulating any other region, which will give a normal direction to each excitement and prevent it from going to excess. Under this influence from Health medical treatment will have a genial effect, which otherwise might prove disturbing and irritating, and the little disturbing influences from lack of sympathy or congeniality or other petty annoyances will be overlooked or unfelt.

The same precaution should be observed in operations up-

on the head. One hand extended upon the superior posterior region which embraces Health will continually do good and regulate all other operations.

It may also be observed that manipulations or passes toward the region of Health will have a better effect than those in opposite or different directions, unless there be some special reason for the latter, as when downward manipulations are used to accelerate the action of the bowels, or disperse morbid conditions.

Invigorating passes should be made backward, soothing and regulative, upwards, stimulating or exciting may sometimes be made downwards, but these if continued long become exhausting and injurious. Such injurious effects frequently occur in electrical treatment. The tendency most favorable generally is backward and upward.

If the healer would approach a number of his patients, either standing erect or lying down, and administer vigorous passes from the hypochondriac or from the hypogastric region upwards and backwards, he would find that they all feel refreshed and invigorated, and like the operation.

I do not perceive any possible harm to arise from the continued and vigorous exertion of the health region. Yet in its highest energy it creates an abundance of vital and moral power which must crave a field of exertion and would rebel against the cramped situations in which many are found. It is here to be observed that as we descend the back the influence becomes more active at the lower margin of the scapula assuming the character of playfulness and further down the self-reliant impulses which would not be content with a quiet life. A more quiet influence is found higher up — a healthful serenity and fortitude being found at the top of the shoulder, as we find it at the summit of the head, vertically above the cavity of the ear, adjacent to the median line.

The sensitive, depressing hypochondriac influences which are associated with the regions of the solar plexus and anterior margin of the liver, and which in diseases of this region display themselves in gloomy sensitiveness, are antagonized by the region of buoyant fortitude, which lies between the side of the neck and the

exterior aspect of the shoulder. Hence this region is disturbed by all affections or irritations of the liver, but not by its inactivity. And as this is the locality at which the suprascapular nerve proceeds from the superior portion of the brachial plexus (the portion which has the closest sympathy with the brain) this fact explains the pathological mystery that affections of the liver indicate their existence in many cases by a pain in the shoulder in the region supplied by the suprascapular nerve. The phrenic nerve which communicates with the liver as well as the diaphragm has commissural branches which connect with one of the nerves to the shoulder.

If the region of health be so important, the suggestion might arise that treatment through this region alone would be all sufficient, and no doubt a successful practice might be conducted in that way, for the public accustomed to the delays and failures of old medical systems, does not know enough to understand what ought to be expected from a course of treatment or how to distinguish rational treatment from that of pedantic ignorance.

The greater importance of the shoulder region, the spinal column and the entire back should not lead us to neglect other regions; we should carefully avoid that common fault of narrow minds, concentration upon one idea or one method to the neglect of everything else. A successful practice might be conducted solely by treating the back of the trunk and the head or applying tonic plasters upon these posterior regions or even tonic metals.

A fantastic class of healers has arisen who make their cures by sitting back to back with the patient — a method which ought to be efficient in imparting vitality and health directly from one spinal column to the other. If this method had been introduced in a modest and intelligent manner it would not have been presented as the hobby of a narrow mind to supersede all other methods. Back to back treatment is one of the numerous methods which may be employed by those who fancy it, and it is certainly recommended by its simplicity, to those who would not burden their minds with scientific knowledge. It is an application of the entire region of vital energy, in the operator, to the corresponding

region of the subject, and therefore cannot fail to do good and make many cures which might be made more satisfactorily and speedily if the operators had proper instruction in Sarcognomy.

The time occupied in sitting in this manner is no doubt profitably spent by those who know but this and nothing more. Yet, in the same time an instructed healer would not only rouse the vital force of the posterior region with his hands but produce all desirable effects on other portions of the body and the head.

The back to back process is too simple an affair to impress the popular mind, unless dignified by a mystical theory, which may give the opportunity for a pretentious and transcendental metaphysics. The theory of the nonexistence of matter and of diseases which answers its purpose as an amusing philosophic toy, seems strangely out of place when brought forward as a sober practical truth to guide a practical operation performed by and upon material bodies. The absurdity of the theory is its greatest fascination. As there are persons who, when on the brink of a great precipice, are strongly impelled to throw themselves off, so there are many who in the presence of a great mystery, or what seems to be such, are tempted to plunge into the deepest gulf of absurdity that is visible, as we see in some of the intensely absurd theological dogmas that have ruled the civilized world.

The upper posterior portion of the trunk — the shoulders and the space between them being the tonic region of the constitution, all processes are invigorating which concentrate the vital forces to that part. Stimulating and tonic plasters are therefore beneficial on this region, and warm clothing has a tonic effect. The capes of the overcoat formerly in fashion were really useful and the shawl is one of the most valuable of female garments, the use of which has been of great benefit to health and life, on the other hand the chilling of the shoulder region is peculiarly prostrating to all the powers of life, and it has been maintained by intelligent physicians that the chills ascribed to malaria were more properly attributable to the depressing influence of nocturnal cold operating on the shoulders.

When riding or walking on a clear night with a cloudless sky

the shoulders are exposed to the intense cold of the planetary inter-spaces with which they are exchanging radiation. Unless protected by an umbrella or heavy shoulder clothing, this is a dangerous exposure to delicate persons. Still more dangerous to sit at night beyond the shelter of the house or porch ; but the injury is far less when the sky is covered with clouds, which reflect the warmth of the earth and shelter from the stellar region of cold so that the earth surface is less cooled and there is less dew.

In accordance with these principles mankind generally understand that the back must be well clothed, and we are accustomed to speak of clothing as for the back, while we are accustomed to leave the coat open in front. A similar exposure of the back would be so injurious it is never attempted. The opening of the vest at the middle of the breast, even when facing the cold wind, is harmless, while the very same exposure between the shoulders would be dangerous — for the back is the tonic, and the front the atonic region. The front receives impressions, and the back re-acts and resists by its own spontaneity, sustaining a vital force, which the front tends to expend.

Nature has carefully guarded the seats of vital force. It is the front of the head, as well as the front of the body that faces the cool breeze without injury. The top, the side and the back of the head which are the seats of our vital forces, are well protected by hair. The front, the forehead, the seat of unvital and devitalizing intellect is bare. So are the anterior parts of the temples and the upper part of the face, in which all the functions are non-vital or exhausting. The chilling of these regions may retard intelligence and pliability, but never injures health or life — even the loss of a considerable amount of brain in these anterior regions is not a serious affair for health or vitality. While the passive, sensitive and yielding functions of organs behind the upper part of the face, render them so unnecessary to vital power as not to require much protection ; the organs covered by the lower part of the face are highly necessary to life, embracing, as they do, calorific, respiratory muscular and digestive capacities, and hence the beard thickly covers precisely the regions which need protection, and when an intensely

cold wind renders the warmest clothing necessary, a woollen wrapping around the lower part of the face and neck, where nature has placed the beard and hair, is worth more than five times the amount of clothing applied anywhere else.

Returning to our subject — the posterior regions of body and brain are protected by being in the rear and thus escaping collisions. Their life power residing in the brain and spinal cord, is protected by the very strong bones of the skull and the spinal column. Hence the position instinctively assumed by the sick and infirm, lying horizontally on the back, gives great preservative and recuperative power by the warmth which it gives the spinal column, and the predominance it gives the brain, which is relieved from the tax of muscular effort, and has a better blood supply in the horizontal than in the erect position. The advantage of the horizontal position is sometimes lost by those who after lying on the back turn on the side without bringing warm clothing against the back to maintain its warmth. The importance of the spinal column is illustrated by heat as well as cold. Very injurious and debilitating effects are experienced by those who stand in such a position that the back is continually exposed to the heat of a fire or stove.

As we know the nervous system to be the seat of life and the measure of its development, we next proceed to consider the brain power.

CHAPTER X.

THE OCCIPITAL ENERGIES.

Brain power and its location. Prior developement of the brain. False doctrines corrected. Brain power compared to Health power. Connection of the latter with Moral Power and conduct. Local treatment, Vital force and sexual vitality. Locations of Vital Force. Its distinction from Health. Influence of Vital Force when roused. Its connection with Nutrition. Location of the latter. Its influence on the constitution. Importance to invalids. Treatment through brain. Digestion. Its connection with the spine and with the gastric region. Organ of Alimentiveness. Its depressing influence. Buoyant Fortitude. Its moral association. Fasting. Influence of Firmness, pathognomically explained. Hunger and appetite. Best method of treating stomach. Physiological influences of firmness and the shoulder. Gastric irritations and emesis. Gastric medicines. Proper manipulations. Region of assimilative absorption. Moral forces concerned. How to promote assimilation. Spiritual relations of this region. Intellectual and occipital influences. Retentive power of the latter. Relaxing power of the former. Contrast of the Adhesive and intellectual regions. Adhesiveness on the occiput and on the back. Combativeness, its location and influence. Importance of Adhesiveness to patients. Importance in society and business. Retentive influence of the back. Its explanation. Region of business energy. Effect of spinal injuries. Of repletion. Cooperation of the energies. Conservative and destructive agencies. Upper and lower part of the abdomen.

BRAIN POWER in Sarcognomy (cooperation of the body with the brain) belongs to the cephalic region of the cord. Why it is located there and how it operates were fully illustrated in the chapter on the Spinal Region.

The recognition of the brain and its cooperative corporeal region as the seat of life is a great step in the transition from the old to the new physiology. It is sustained, not only by the clear demonstration that life is an influx, which was referred to in the second chapter, but also by the priority of the formation of the brain in the earliest embryonic condition of vertebrate animals. In the

earliest charges of the vitelline substance of the chick; the blastoderm exhibits a mucous and a serous stratum or hypoblast and epiblast — from this latter are evolved the cerebro-spinal system and the cutaneous surface. Originating thus together they preserve a parallelism and sympathy which are illustrated in Sarcognomy. In the developement of the cerebro-spinal system two dorsal laminæ rise up on each side of the primitive groove of the blastoderm and unite so as to enclose a channel for the cerebro-spinal system in which the brain and spinal cord are developed. In this development the cephalic end takes precedence in time, and is much the largest part, which shows the priority of the brain in developement in connection with its primitive centres the pituitary and pineal bodies.

Where life is regarded as the product of chemical operations taking place all over the body, and the brain as merely an intellectual, conscious and volitional centre, it appears rather as an organ of vital expenditure and source of weakness than as the seat and source of vital power. Hence we have been abundantly warned against extreme culture and mental precocity as endangering or consuming vitality, and illustrative examples have not been lacking. Education was thus made to appear a burdensome if not a dangerous affair for delicate constitutions.

Yet these notions were all scientific errors and practical mistakes. The *proper* cultivation of the brain is the most efficient method of developing true life, health and longevity, and by acting upon this principle I am enabled now in my seventieth year to enjoy in buoyant health, vigor and happiness the maximum capacity of my life.

The great mistake of most biological theorists has arisen from their ignorance of the true character of the brain, in which they recognize only what they are *compelled* to admit, intellec-tion and the voluntary guidance of muscular motion, both of which are exhaustive operations, expending vitality, while they perceive nothing of the great energizing powers of the superior and posterior regions. The mental developement and excitement which are injurious to the young are solely intellectual, and when education is confined to forcing or training the intellectual faculties it is necessa-

rily exhausting and injurious in its tendencies, of which all academic colleges and universities are today examples.

But the early developement and power of the brain in its higher vitalizing regions, so far from being exhaustive or injurious, is the precursor of a noble and powerful manhood, and the evils just mentioned result not from the normal, but from the abnormal, one-sided growth or culture, the premature developement of the sensitive and debilitating faculties at the expense of the vital forces. The boy whose manly courage enabled him to play the part of a man in assisting his family, taking care of his brothers, managing the live stock on a farm or transacting business for his father is really and substantially precocious by a normal developement of the brain, and hence displays a manly vigor beyond his fellows, ending in an energetic and able manhood.

Brain power, the power that vitalizes and sustains everything belongs to the region protected by the hair and centralizes to the centre of the scalp from which the hair radiates. It manifests itself in the strength of the voice, the power of the eye, the energy and impressiveness of the bearing, the vigor with which every faculty acts, and the power of endurance.

The action of the cephalic region (brain power) is somewhat more powerful but less harmonious than that of the Health region, and commands more respect than love or admiration. The Health region wins by a greater degree of sweetness, grace and insensibility to injury. How pleasing the thought that the most perfect enjoyment of life and efficiency are associated with the most attractive manners and the most faithful attention to our social duties.

It is one of the most interesting and instructive revelations of anthropology that every departure from the proper line of conduct is a departure from perfect health and enjoyment, and therefore the more Godlike the life, the greater its internal rewards, although there may be suffering inflicted by those who, living on a lower plane, are a cause of unhappiness both to themselves and to others.

The virtue which is thus rewarded and which is associated with the upper posterior region of the head and trunk is not the passive virtue which does no wrong act and cultivates unselfishness,

as the supreme purpose, but the active virtue which is ever energetic in discharging duties, in giving pleasure to all around and exerting a wholesome, attractive, uplifting and beneficent influence in all intercourse, while devoted and zealous in industry.

The stimulation of the Cephalic and Hygienic regions would be enough but for the reason that the departures from health being located in different parts of the body need the direct assistance of the operator's vitality at each location in addition to the influence transmitted from controlling centres. Still this is a well established though marvelous fact that influences may be transmitted from the soul and brain, which with supreme power dissipate the most calamitous and long standing chronic diseases.

Two of the most important inferior regions for local treatment are those of vital force and sexual vitality.

Vital Force, situated on the summit of the posterior aspect of the thigh, is not the perfect and satisfactory vital power which is found in the shoulder, but a similar power on a lower plane — a power displayed in the muscular system and shown by indomitable energy and restless activity, yet not so restless as the influence of the lower part of the thigh.

We find this vital force on the head, about an inch behind and interior to the lower end of the mastoid process (behind the ear) and its influence gives us a consciousness of physical power. I recollect how distinctly I felt it sympathetically start about forty years ago, from contact with the organ in the head of an impressible subject who was a good walker — a feeling as if a walk of ten miles would be a pleasure.

The difference between the organs of Vitality, or Vital Force, and Health is, that the latter gives a full harmonious development of character or personality, including physical capacity and endurance; while the former gives physical power alone, without sustaining health or firmness, and without moral government or character. Acting in predominance, it would give the desperate and hostile energy of the outlaw, whose crimes have arrayed the world against him. In this predominance it destroys the moral sense, and concentrates all the power of the brain and soul in the

impulsion of the muscular system. Yet in the *normal* course of life the basilar forces of the brain do not run into such evils. On the contrary, each basilar organ seems to act as a radical power, sustaining the action of a higher faculty, as will be explained in my system of Anthropology. This vital force is antagonistic to the humane and tender sentiment which is most deeply interested in the condition of others, and which causes some persons to faint at the sight of great suffering or bloodshed.

In the invalid this power needs rousing, unless his condition be one of violence and passion, tending to insanity. The body being in an enfeebled condition the spinal cord is not acting with proper vigor, and needs an influence descending from the brain, which is elicited by the organ of Vitality, for its line of action is directly downward. Under this influence the deadly languor of disease gives place to more natural feelings; debility is diminished; all the organs begin to act in a more normal way, as if they had received their appropriate medicine. The process of decay and dissolution is checked, and healthy nutrition is revived; for the region of NUTRITION is adjacent to that of Vital Force, and goes with it by proximity. In applying the hand upon Vitality it should be extended so as to cover the region of Nutrition or growth, which is situated a little more anteriorly, just below the head of the thigh-bone.

As one stands erect with his arms hanging by his side the wrist falls upon the head of the thigh-bone (femur); if then the wrist be moved backward just behind the femur the palm of the hand would fall upon the region of Nutrition, the influence of which produces growth and improves the capillary circulation. This region being usually more developed in women than in men enables them to maintain their proper developement and plumpness with a smaller amount of food, and to nourish without injury or loss the children whom they sustain during gestation and suckling.

A deficient developement of Nutrition produces a tendency to emaciation, no matter how ravenous the appetite. Persons inclined to corpulence or *embonpoint* are often small eaters (especially

females), their power of nutrition being so great that little food is needed.

The stimulation of the organ of Nutrition is very important in all nervous constitutions. The direct influence of the organ is soothing and comfortable — its ultimate effect overcomes the nervous condition which is mainly due to a deficient supply of blood, a deficiency which may be overcome by the organ of Nutrition, with the aid of good food, to which phosphates, hypophosphites and a very small quantity of iron, make an important addition, effecting the developement of blood.

In the majority of invalids both Nutrition and Vitality need stimulation, and the hand can easily be applied so as to cover both. One may stimulate himself in these regions by applying the hands, and this application upon retiring at night or before rising in the morning will have an appreciable effect, as I have verified in my own person, although one is too much accustomed to his own personal aura to be as strongly affected by it as by the influence of another.

These localities on the body explain the very injurious effects of sitting on a cold stone, or the cold wet ground ; they also explain the sedative effects of a very warm sitz bath and the energizing effects of a cold sitz bath so conducted as to promote reaction.

The effects produced at the summit of the thigh are satisfactorily produced also at the basis of the brain. Thus when the hand grasps the junction of the head and neck covering the base of the cerebellum, a most beneficial, vitalizing and restorative influence is diffused throughout the person, which is increased by placing the hand at the summit of the thigh.

The region of Nutrition does not embrace all the nutrient functions of the constitution. There are three other influences to be considered — those of digestion, absorption and tonic retention or resistance to dissolution.

Digestion depends upon the energy of the stomach which is sustained by the lower half of the dorsal region of the spine, upon which the hand should be placed for its invigoration. In accordance with the general principle that power is located posteriorly, but excitement farther forward, midway to the front we shall find

the hungry or digestive influence at the margin of the ribs on the side, a little in front of the middle line, and nearly on the level of the stomach. This corresponds with the gastric region on the head, in front of the cavity of the ear, which is really the organ of Alimentiveness located by phrenologists heretofore higher than it should be. In stimulating this locality we assist and accelerate digestion, producing, if continued sufficiently long, a feeling of hunger. This feeling, the product of the Alimentary organ, is more depressing than stimulating, and tends to produce gloomy, selfish and irritable feelings. Hence every one knows that it is not judicious to seek favors from any one when he is hungry. The explanation is that the Alimentary organ is in the midst of the group of selfish, gloomy and indolent feelings. Hence, whenever it is over active, whether from hunger, dyspepsia, gluttony, drunkenness or noxious, nauseous or poisonous ingesta, it greatly lowers the vital forces and moral energies. One attains his maximum energy only after the irritation of hunger is relieved by food and the gastric action roused by the food has subsided, from its digestion, when the buoyant energy caused by the addition of nourishment to the blood antagonizes gastric action and the stomach ceases to disturb us.

Buoyant Fortitude is the character of the region which antagonizes Alimentiveness. This is developed by a state of repletion which gives nourishment to the brain, as we find after the enjoyment of good food and drink. But it is developed also by the moral causes which energize the upper region of the brain. The resolute purposes of heroism in war or struggle of any kind, and the lofty enthusiasm generated by religious, philanthropic, patriotic, loving and conscientious emotions, or even the earnest application of study will so energize the firm and buoyant regions of the brain, as to arrest gastric action and destroy entirely the desire for food. Thus many persons in the zeal of study or labor reduce the stomach to such inactivity as to lay the foundation for dyspepsia.

Under great moral or religious excitement fasting is natural — but the attempt to enforce fasting as a ceremony, when it is not prompted or sustained by any religious or earnest emotion, is only

another mode of irritating the stomach and increasing the amount of demoralizing animality. Such fasting, however, harmonizes well with the gloomy theology which dwells upon the prospect of eternal misery for our fellow beings.

The influence of the higher emotions in controlling the hungry gloom of the stomach and sustaining our buoyant vigor is explained by PATHOGNOMY, which is the mathematical key to Anthropology, and will require a special volume for its elucidation.

Pathognomy illustrates the law of linear direction which *governs all life in all worlds.*

The pathognomic direction of the region of Firmness, in which it nearly coincides with the whole moral region, is upwards, drawing vitality and circulation toward the brain and the shoulders.

In accordance with this influence the red blood ascends by the aorta, the carotid and vertebral arteries to the brain, developing its maximum power and the power of the spinal cord; and the thoracic duct, starting from the level of the second lumbar vertebra, comes upward for about twenty inches, carrying nearly ripe blood, the chyle, to the sub-clavian vein and thus removing the depression which is the cause of hunger. The chyle is thus carried up to the corporeal region of Firmness and Fortitude.

This strong volitional influence is absolutely essential to health. Whenever, through the opposite elements, fear and despair, this upward influence is checked, the countenance becomes pallid, the brain has less circulation and loses power, the features droop, the person is impoverished in spite of food, the thoracic duct carries up little nourishment, life withers away and sometimes even the scalp is so paralyzed and changed that the hair turns gray or white from a night of terror. Life declines whenever Firmness and Hope are diminished.

The hunger which belongs to the organ of Alimentiveness is not an invigorating impulse *per se*, being distinct from the eager desire and impulse to take food which belongs to the posterior portion of the brain on the same level, and on the body is found farther back and higher up. Hence in treating the affections of the

stomach, the hand should be extended upward and backward in the direction of the ribs to the lower dorsal region — the Alimentary location being used more to rouse from inactivity than to give vital power. We may have from the posterior influence a vigorous appetite without any of the depressing feelings of hunger, or we may have from Alimentiveness the depression of hunger without much appetite, or efficient digestive capacity. We are far below the standard of health when such a condition can arise, or when any loss of a meal or irregularity of diet can produce much depression.

This depression is resisted in the region of Firmness and Health, which should ever predominate over the sensibilities and appetites. The portion of the firm region which is on the median line (or sagittal suture), vertically above the ear, and on the shoulder adjoining the neck, is antagonistic to the excitability of the heart and gives a feeling of fearlessness. The portion about an inch from the median line is antagonistic to the excitability of the liver and stomach, and hence resists the hypochondriac gloom of the hepatic region and the debilitating gloom of hunger. This buoyant influence we find on the shoulder, behind the middle of the upper surface, between the neck and the acromion process or prominent angle of the shoulder. Hence this is the region to antagonize hunger and the gastric irritations of dyspepsia, which produces the selfish and boorish ill-humor so conspicuous in Carlyle, the famous representative of the moral tendency of gastric irritability. But Carlyle is not the only conspicuous example of literature empoisoned by the unhealthy influences of a diseased or depraved body.

If we stimulate the region of buoyant fortitude by the hand or by a plaster, we relieve the gastric irritation, but there may be materials — vitiated secretions or undigested food — which maintain the irritation, and which, to facilitate our success, should be overcome medically, as by an emetic or a peptic anodyne. A simple emetic of warm water, which may be made more effectual by adding one or two teaspoonsful of the tincture of lobalia, or ipecac, and at the same time more soothing by stirring in enough of

slippery elm to make it mucilaginous, will unload the stomach in a healthy manner. An extemporaneous emetic is frequently prepared by adding mustard and salt to a glass of warm water.

Soothing and antiseptic agencies may be used to control the contents of the alimentary canal, or to soothe and protect the stomach, after they are ejected. For the soothing and removal of irritation, one of the best articles is the *Scrophularia nodosa* or figwort — an article the U. S. Dispensatory says is “very little used” and the gastric virtue of which seems to be entirely unknown to the medical profession. Half a teaspoonful of the fluid extract may be repeated hourly until relief is given. Ten or twenty grains of the bisulphite of lime or bisulphite of soda in a cup of water will counteract decomposing or fermenting conditions.

If acid be present, ten or twenty grains of calcined magnesia bicarbonate of potassa or bicarbonate of soda in solution will serve to neutralize it, or it may be neutralized by milk.

It will be expedient to accelerate the restoration of a feeble stomach by twenty drop doses of the fluid extract of *alnus rubra* (or tag alder) with which the scrophularia would favorably cooperate in controlling irritations. Medical treatment is not, within the scope of this volume, but I think that an enlightened healer should beware of the narrowness of mind which confines itself to a favorite class of agencies, and should master as far as practicable the vast and powerful resources of the *materia medica*, with which he can expedite and complete his cures, and do justice to a class of patients who cannot afford to pay for protracted nervauric treatment. Hence I make a few suggestions of medical remedies.

Gastric troubles may be truly dyspeptic from the irritation of the nerves, and concentration of excitement at the stomach, or they may be apertic from the lack of action in the stomach. In the latter case the Alimentary region may be excited on the body, and on the head; but in the former case some dispersive passes are necessary to remove irritation and the regions of Fortitude and Health should be excited to suppress the gastric trouble while the lower dorsal region is used to give gastric vitality.

In addition to the regions of Nutrition and gastric energy a proper nourishment requires the process of assimilative absorption, for want of which digestion fails in its purpose, and Nutrition has but an imperfect supply of material. The region of Assimilative Absorption on the body is immediately around and above the umbilicus. The application of the hand at this locality produces the tranquil feeling favorable to rest and sleep which belong to assimilation. In applying the hand here we cover the absorbent region or mesentery, and the course of the absorbents to the origin of the thoracic duct, the common receptacle of chyle at the second lumbar vertebra — also the jejunum the chief source of the digestive supply of chyle, the duodenum, pancreas, colon and lower portion of the stomach. The energy of this region with its hundred and fifty mesenteric or absorbent glands, effects the final preparation of the chyle and its propulsion on its upward course to join the mass of our blood through the subclavian veins which convey it to the right side of the heart to pass through the lungs before it mingles in the general circulation.

It is obvious therefore that a failure in assimilative absorption would interfere with the results of digestion and nutrition. In many cases no doubt this failure of assimilation is due to the failure in the moral forces or mental depression. There is a tendency to emaciation and degeneracy in inferior characters. Criminals are generally of an inferior physique. Dramatists contrast the lean and hungry conspirator with the good natured plump and contented citizen. Amiability promotes nutrition by assimilation. "Laugh and grow fat" is an old saying. Amiable and contented animals fatten easily and give milk abundantly while the fierce carnivora are remarkably lean.

Thus we see there is a close association between the amiable elements which cause us to love and assimilate with all nature, and the physiological powers which assimilate and accept the material that is brought us. The assimilative is in fact an amiable region and has an amiable influence upon the character while it is operative. The region immediately adjacent to and above assimilation

is one of amiable impressibility and yielding sympathy* which as we pass upward merges into that of somnolent, somnambulic, sympathetic, psychometric and clairvoyant conditions, of which there is abundant evidence in the records of animal magnetism, which prove the possibility of clairvoyance from the epigastric region.

The region of Assimilation therefore must not be overlooked in treating the general constitution and the digestive functions. It promotes impressibility, amiability and healthful repose, bringing the subject more fully under control, into sympathy with the operator, and promoting restoration by nourishment, for which purposes the patient should be in the horizontal position, lying on his back, when this region is exerted, to facilitate the progress of the chyle in the thoracic duct by a horizontal instead of a vertical course.

The assimilative tract is one of healthful tendencies. The ilium with its Peyer's glands is frequently involved in disease, not only in fevers but in consumption and in cholera. Disease is less frequent in the duodenum and jejunum. Brunner's glands in the jejunum are remarkably free from disease.

Hence the absorbent region is very appropriate for stimulation and does not so frequently require dispersive manipulation as the region below the umbilicus.

It is probable that the assimilative or umbilical region has more extensive relations to psychic life than those involved in the absorption of chyle. The umbilical region is the seat of the original mysterious influx of life, by the connection with our ancestry. This changes after birth into absorption from nature, instead of absorption from the maternal constitution. It is along the umbilical chain that we trace the continuity of the human race back into the darkness of the uncounted ages, in which by influx and evolution man has been brought to his present condition. The process of

* This is, no doubt, the foundation of the old scriptural expression "bowels of compassion." The seers intuitively felt that there were tender feelings in the gastro-umbilical region.

gestation being probably a surviving type or analogue of the creative evolutionary process of the over soul of the universe.

I regard the umbilical or assimilative region as having in the brain and soul important spiritual functions and relations, especially as to personal sympathy, attachment, and spiritual influences, but at present we are considering merely its relations to nutrition, developement and health. The associative faculties which establish the most intimate sympathy and union between any two persons, lie along the median line.

Besides Nutrition, Digestion and Assimilation there is yet another important influence on human developement — that which consolidates and holds together the materials gathered in by digestion and assimilation, and precipitated by Nutrition. That influence we find in the back — in the region antagonistic to the intellect.

To understand this philosophically we must know that the intellectual faculties tend to carry man out of himself and destroy his individuality by merging his consciousness in his environment, or in the thoughts of others. When they plunge his mind into his physical environment by perception and sensation, they lower his nature more effectually than when they carry him into the sphere of spiritual truth and philosophy. But they necessarily impair his physical energy, weaken his desires, unfit him for achievement, and relax both physical and mental fibre, in proportion to their *predominance*, which has very different effects from mere activity.

The impairment of vital force by intellectual predominance renders the tissues softer and less compact, more inclined to disintegration and less capable of sustaining a robust manhood; which is the effect of excessive schooling.

We must, then, rely upon the influences antagonistic to intellect for the preservation of vital force and compactness. The discovery of these influences was a revolution in Psychology. They belong to that portion of the occiput which antagonizes the organs of the forehead, and, as to the body, they are found upon the middle of the back, below the shoulder blades. They may be dis-

tinguished as the Adhesive Group — the group of organs of which Adhesiveness is the centre — organs which desire to keep everything fixed, as the intellect desires change or progress.

The Adhesive region, a region of desire and impulse is interested in that which is personal to ourselves, local and limited — the intellectual in that which is impersonal and unlimited. The intellectual region is interested in all humanity alike — the Adhesive region in our friends alone. The intellectual region avoids action, enterprise, and responsibility — it is at home in solitude; the Adhesive region seeks to be actively engaged in the midst of society and exerting an influence. The intellectual region produces delicacy, sensibility and inactivity — the Adhesive region produces impulsive energy and ability to interest others. The one is passionless and feeble — the other highly emotional and strong. One is exhausted and broken down by social responsibility — the other is spontaneously energetic, will not endure solitude, and continually gains power or influence in society. One develops in solitude, the other in stirring life. One exhausts and emaciates in action, the other grows and strengthens.

The latter is the tonic and vitalizing element which resists the disintegration of the body, by exertion and by fever. It is the element to which quinine and other cinchona preparations appeal, in opposing the decomposition of fever, in doing which they resist the intellectual element so effectually as sometimes to impair the hearing, the memory and the vision.

This stirring, active power holds every faculty ready for social relations and thus gives an attractive vitality to the whole person — a tonicity which resists exhaustive and malign impressions. The word Adhesiveness expresses the physical as well as spiritual character of the faculty. It resists the waste of our physiological and spiritual elements, as Acquisitiveness, resists the waste of our property. Hence it gives compactness to the person, and by retaining the organized elements longer in the body, brings them to a higher vitality and perfection. Thus it becomes the tonic supporter of the physical development, giving to the char-

acter and the person the qualities that are interesting or attractive.

Hence we find it desirable to stimulate the Adhesive region to perfect the nutrient processes and enhance vitality. This region we find on the lateral part of the occiput, above and behind the ear, and on the body below the shoulder blades, occupying nearly two hand's breadth downward.

Lower upon the occiput and upon the back, we find the still more energetic and tonic element of Combativeness, which gives great energy to the muscular system but which tends to give the muscular system a predominance over the cerebral and the evil passions over the friendly emotions. From Adhesiveness upward on the shoulder the influence becomes more pleasant, tending to give the brain and moral nature a predominance over muscular growth and physical force.

Adhesiveness lying between the two assists both the moral and physical forces, as we see it in women sustaining the family relations and in men sustaining personal attachments gregarious life, national unity and cooperation in war as well as sectarian and partisan cooperation in peace.

The many important influences of the Adhesive region should teach us the importance of rousing it in our patients not only by nervauroic treatment but by social enjoyment. The loss of society greatly impairs the vigor of the constitution, especially in those who are very Adhesive. Solitary confinement is a cruel and depressing punishment, and an enforced solitary life or life without friends impairs the general energy and even the vigor of the digestive organs. The indulgence of the social impulses whether in amusements or otherwise is the restorative power which many need, to revive their health; and it is the rupture of the social attachments which so often breaks down the vigor and usefulness of young soldiers, bringing on what is called nostalgia or homesickness. Disappointments in love leave similar effects on women, lowering vitality and impairing the action of the heart. Grief for the loss of friends and members of the family circle often breaks down the health of mothers. When health is thus impaired we should offer the balm of our sympathetic interest and seek to in-

terest the sufferer in new social attractions. All the excitements of active life — business, travel and social pleasure, address Adhesiveness — hence their restorative power. The relation of Adhesiveness to society and business is that of a steady motor power and tonic, preventing us from being discouraged or indifferent, and contributing material assistance to the unconscious processes of organic life. It is a great fountain of spontaneous impulse.

The fullness and rotundity of the back are important to the strength and retentiveness of the constitution. The rounded back which is more conspicuous in the hog than the ox, in the donkey and mule than in the horse, and which reaches its maximum in the camel and dromedary is associated with greater retentiveness and ability to sustain life upon smaller quantities of food.

The location of Adhesiveness on the back is on the lines of nerve distribution from the lower dorsal region, which, as already explained, controls the digestion and assimilation of food internally by the ganglionic nerves. while it braces the abdomen by the abdominal muscles, and thus not only assists by mechanical propulsion the processes of digestion and assimilation, but braces the trunk by the action of these muscles, as it must be braced for any vigorous exertion. The compression of the abdominal viscera and expulsion of the dark venous blood contained, greatly increase the general energy.

Thus does the Adhesive region carry out its energizing influence and its attractive and assimilative nature which gives to the adhesive the power of attracting and interesting friends — the quality which is called magnetism from its analogy to the action of the magnet.

We now perceive that the Adhesive region or middle of the back should not be overlooked in nervauric treatment. It extends across the back behind the arms on the level of the lower half of the humerus (upper arm) or in other words below the shoulder blade. Its middle portion, along the spinal column, has a more positively energetic and muscular influence, sustaining general activity, and may be properly called the region of Business Energy

which sustains an active life. These explanations make it apparent that affections of the lower dorsal region must impair the digestive powers and the general energy — the blind energies of the animal nature opposed to the intellectual. Hence injuries impairing the spinal power, which disqualify for active life, are frequently accompanied by a predominance of the intellectual faculties — by wakefulness, clairvoyance, somnambulism and spiritual phenomena, as in the famous case of Mollie Fancher of Brooklyn, while on the other hand an overload of food which taxes the dorsal region interferes very seriously with intellectual action and energy, and the soundest sleep is obtained by resting on the back so as to keep the Adhesive region warm.

It is now apparent that the Vital Force and Nutrition at the posterior summit of the thigh cooperate with Business Energy, Adhesiveness, Alimentiveness and Assimilation in the middle of the trunk, and that all are needed in restoring the invalid.

The tonic character of Adhesiveness as a conservative and retentive power, alike in physiology and psychology, is illustrated by its immediate proximity to the region of Coldness, just behind the arm on the side of the chest. Coldness is preeminently the conservative influence which forbids decomposition and combustion. Cold is antiseptic as heat is putrefactive in tendency. Coolness produces muscular firmness, as heat produces muscular relaxation. The calorific region of the body is that of dead, decomposed matter — the Hypogastric region.

The Adhesive associated with the lower dorsal region, presides over the inception and preservation of dead substance, for vital purposes by the stomach and absorbents. The secretion of the stomach is acid and pre-eminently antiseptic, while the lower intestines have the alkaline condition which is favorable to decomposition. Their inflammation produces the maximum of fever, but the inflammation of the stomach has so little febrile intensity that the pulse is very feeble and the limbs dry and husky. Thus the stomach is associated with the superior half of the brain which is cool and conservative, and it manifests this conservative character chiefly when Adhesiveness is well developed.

CHAPTER XI.

THE ABDOMINAL AND CRURAL REGIONS.

The gastro-enteric region, its location in the brain and on the abdominal surface. Digestion and defecation. Treatment of diarrhoea, dysentery &c. Region of Energy. Control of appetites. Tonics. Source of intemperance in the brain. Its cure by moral power. Its treatment by medicine. The nervo-auric treatment. diet. Organ of the love of stimulus. Its degrees of action. Cure of intemperance. Remedies for gastric conditions. Lumbar region. Expellant functions. Controlling the functions through the brain. Causes of the appetite. General view of localities on the abdomen and their functions.

Physiological and moral influence of the thighs, the knees and Nutrition. Embryonic and microcosmal relation of the leg to the vertebrata mollusca, articulata, radiata and mineral kingdom. Relation to fishes, reptiles, birds, and quadrupeds. The cold aquatic temperament on the front. Aerial and mammalian posteriorly. Effects of their excitement. Cold blooded life — vegetables, zoophytes, worms, articulata, mollusca, reptiles and fishes, strong in reparation but void of inflammation. Birds, quadrupeds and man have least restorative power. Cold blooded elements in the human constitution developed by sarcognomy. Possibility of avoiding inflammation and fever, an important discovery. Curative processes for pneumonia, bronchitis and consumption. Tibial surface and dorsum of the foot. Importance of hemastasis as an aid. Invigorating the lungs. Anticephalic character of the foot.

THE Gastro-enteric region controlling the alimentary canal, is located in the brain at the base of the middle lobe running inward along the base of the petrous ridge of the temporal bone, and is reached from the surface along the course of the lower jaw, from its insertion in the glenoid cavity downward to about midway between its posterior interior angle and the center of the chin.

The corresponding tract on the body extends downward and forward from the margin of the ribs to a point midway between the umbilicus and the inguinal depression or angle between the thigh and the abdomen. Along this tract the alimentary canal may be controlled. At its upper end we rouse the activity of the stomach

and as we descend we act upon lower portions the lowest being efficient in promoting evacuation of the bowels. Constipation is overcome on this tract by downward manipulation and vigorous action at its lower extremity.

In irritations, such as those of diarrhoea, cholera, dysentery, cholic, dispersive passes backward and upward should be made with energy, and a general stimulation along the spine. The complete control over such conditions is effected on the top of the shoulder, and on its upper posterior aspect. The abdominal region in predominance has a relaxing, debilitating character, whether that predominance be produced by excessive food and drink, by oppressive undigested materials, or by irritations and inflammations. The utter prostration of all physical and mental energy, which occurs in dysenteries, fevers, and other abdominal irritations attests the character of that region. Its antagonist in the shoulder is the region of Energy, which brings all the vital forces into active play, and makes us intolerant of idleness. This region of Energy, corresponding with the top of the shoulder, on which we bear our burdens, directs the vital forces according to the pathognomonic law to the brain and from the abdomen, producing thereby the indifference to food, which we feel when our interest and energy are roused. The same indifference to food and drink is produced by the tonics and nervines which rouse our energies, whether they be drugs or moral influences, and it is by the use of nervine tonics that we increase the moral energies and subdue the urgency of appetite, so as to enable one who wishes to reform to overcome the propensity for intoxicating drinks.

Temperance societies have relied too much upon a furious warfare against alcohol, but intemperance does not depend entirely upon the temptation offered by the free sale of alcoholic drinks, and cannot be entirely controlled by limiting the sale. It depends upon a natural appetite which exists in the base of the brain in the posterior part of the organ of Alimentiveness, which comes into play under circumstances of nervous depression or exhaustion, just as thirst appears when there has been an exhaustion

of fluids. Hence a demand for stimulation of some sort is almost as universal as a demand for food and drink.

Thus nervous depression or lack of cheerfulness and buoyancy arises not only from depressing causes but from the predominance of the base of the brain, the discordant condition of society — the predominance of the animal over the moral, which is a condition more or less gloomy and eager for enlivening influences. Hence the *present developement* of the human race has the conditions in which intemperance *must flourish*, and all savage races become drunkards when they have the opportunity. But women who have a decided predominance of the moral over the basilar region are very seldom addicted to intemperance, and when men are equally developed they will become equally temperate.

This developement is often affected by powerful religous im-
pressions, and the greatest success in the treatment of intemper-
ance has been in the inebriate homes in New York and Philadel-
phia, in which religious influence is relied upon.

There is not sufficient moral energy in most persons to resist the discouraging and depressing influences of the struggles for a livelihood, the competition of rivals, the hostility of enemies, the uncertainty of business, the lack of reliable love and friendship, and the moods of ill health. From such depression we may be relieved by cheerful society and friendship, by the moral enthusiasm of any great and worthy purpose, or by fervent religious sentiments, or we may be placed permanently above the gloomy level of intemperance by such a moral education as will give the higher sentiments an unchangeable control.

I see no hope for the eradication of intemperance by law, until moral education shall have done its work. But in the meantime every beneficent influence, every happy social influence, ev-
erything which diminishes the burdens and calamities of human life, everything which increases the influence of women, every-
thing which gives cheerful and innocent amusement, contributes to diminish the demand for alchoholic stimulants.

The purification of the atmosphere, the removal of the sources of malaria and all that improves health contribute to tem-

perance, while malaria and misery work in the opposite direction.

I think it not impossible to prepare medicines which will so effectually sustain the energies of the nervous system as to check intemperance and reduce its ravages to a small amount and I should not hesitate to prescribe such remedies in any case, modified to suit the temperament or condition of each individual. Intemperance may be based upon conditions of the nervous system, the liver, or the digestive organs, which must be controlled by the remedy.

A diet should be adopted in which, fruits, cereals and vegetables are most prominent, the greatest benefit being derived from fruit, and the stimulation desired should be sought in tea and coffee. Under such regulations the alcoholic appetite is much more easily subdued. The treatment should be dispersive from the gastric region, and generally upward over the abdomen, and should stimulate the entire upper region of the trunk, front and back, above the mammae, to produce that elevated, happy, amiable and firm condition in which ardent spirits are repulsive.

They are extremely repulsive to refined women, on account of the influence of their moral nature which pervades every fibre and repels all gross and debasing influence. But in proportion as the basilar forces are roused, coarse stimulants and gross food become acceptable. I have found in my experiments that when the organ of love of stimulus is gently roused it requires mild stimulants, such as tea, coffee, and condiments, ardent spirits being disliked ; but as it is further excited, malt liquors, and wines are desired, first diluted, then pure — and a delicate female whom a spoonful of brandy would almost intoxicate may be made under this basilar influence to seek the strongest liquors and drink them like an old toper without becoming intoxicated, just as one exhausted by hemorrhage or prostrated by serpent bites may take a pint of brandy without intoxication. This impunity depends upon the depressant influence of the love of stimulus, and if that should cease to act extreme intoxication would appear at once. Thus when the very impressible Mr. Inman had taken a drink of brandy under the influence of love of stimulus without showing any effect, I sup-

posed the impunity would continue, but when I continued my experiments, exciting the upper region of the brain, diverting the activity from the love of stimulus and thus destroying his capacity for enduring it, he suddenly sunk to the floor dead drunk, to my astonishment, and could be relieved only by re-exciting the love of stimulus. For a similar reason in convivial assemblies we see intoxication much sooner reached under the influence of social pleasure than when men are sipping their liquor alone or taking it as a stimulus under the pressure of business. Men of a coarse and morose nature drink large quantities with impunity, while the more amiable class speedily succumb in intoxication, and are more rapidly destroyed, as women would be if forced into drinking. Hence the most signal examples of alcoholic ruin occur in the brightest members of society, who are seduced by the influence of bad examples and local fashion from their natural temperance, or who yield in moments of temporary depression.

The man who resolutely desires to reform may find it a desperate struggle to resist the unbalanced action of his brain, producing a passionate craving, but if assisted by nervine tonics he will certainly be able to conquer, and if of the impressible temperament, a little nervauric treatment will completely banish the evil influence. In ten minutes the appetite of the sensitive may be extinguished and alcholic drinks made loathsome, and if this process is repeated as often necessary to make the temperate inclination habitual, all danger will be banished.

The healer will most readily relieve abdominal irritations and diseases by dispersive passes upwards with one hand while the other is on the top of the shoulder, treating each side alternately, but I should mention for his benefit some simple remedies which he will find very serviceable, either by external application or by internal administration. There are more than a hundred remedies in our *materia medica* which I have found of marked value in their direct action on the stomach, to soothe, invigorate or relieve it. In flatulent conditions angelica and celery seed are the most useful, but when the disturbance amounts to a cholic, *Dioscorea villosa* is a sure reliance. In gastric weakness mild tonics such as Camo-

mile, *Columba* and *Coptis* (gold-thread) are very beneficial, but a more efficient tonic restorative influence, extending to all the viscera, is found in the *Balmony* (*Chelone glabra*), *Barberry* (*Berberis vulgaris*) and the *Ptelea trifoliata*; the *Balmony*, *Barberry*, *Hydrastis* and *Mountain Ash* (*Sorbus aucuparia*) are all efficient in resisting the alcoholic appetite and repairing its ravages. The flow of gastric juice may be promoted by *Alnus rubra* (tagalder), assisted by a little *Capsicum* and *Inula* (elecampane).

The deranged conditions of the stomach from irritations and improper contents are generally relieved by charcoal and the presence of acid by calcined magnesia. If this is not sufficient, the following prescription may be relied on:—

Fluid Extract of *Scrophularia nodosa*,
" *Cochineal*,
" *Triosteum perfoliatum*,
" *Sambucus Canadensis*,

each one ounce — mix. Dose, a teaspoonful every two hours until relief.

The use of pepsin or lactopeptin as an assistant to the powers of an enfeebled stomach will overcome many difficulties.

In treating the abdominal functions the hands should be applied on the lumbar as well as the lower dorsal region — the dorsal region having more to do with the digestive and assimilative functions, and the lumbar region with the expulsive functions of the lower intestines.

Psychologically speaking the tendency of the upper half of the body is attractive and retentive — the lower half hostile, degrading and repellent. Physiologically, the character is the same — the upper half of the body tends to vitalize and retain the nutritive elements — the lower half to degrade and expel them — fecal material is expelled by the ileum — nutrient material is carried up by the thoracic duct. The exercise of the lower limbs rouses the lumbar portion of the cord, strengthens the expellant functions and overcomes constipation. The lower half of the alimentary canal, which sympathizes with the violent passions, is always more developed in the carnivora than in the herbivora.

The treatment of the abdominal functions through the brain involves their stimulation through the lower jaw, and their control through the region behind Integrity which extends from Firmness, (behind Integrity and Cheerfulness) over the temporal arch, just behind Sanity. The hand upon this region checks the abdominal irritation like an anodyne tonic. Upon the jaw before the ear, the fingers produce the same effect as applications upon the alimentary tract on the abdomen. If we place the middle finger upon Alimentiveness before the ear and the thumb upon the organ of Health, the effect upon the sensitive is a gradual restoration of healthy action to the stomach.

The love of stimulus occupying the posterior portion of Alimentiveness immediately at the cavity of the ear, I have found no difficulty in exciting it separately so to produce a desire for alcoholic stimulants and ability to bear them.

The appetites for food, drink and stimulation being at the base of the brain are necessarily roused by basilar action — by a stirring, active life, especially when such a life is associated with no cheerful pleasant influences, but is in the sphere of selfishness and rivalry. The hunger of active labor is much more urgent than that of sedentary pursuits and requires a freer supply of nitrogenous or animal food. Its nervous depression (for basilar action or muscular exertion consumes the vitality of the brain) creates the demand for stimulation which leads laborers by millions to the shops that supply them beer, gin and whiskey. The demand for these will not cease until labor can be made less depressing. When the circumstances of labor are more pleasant and social, when its monotony is relieved by song, music and conversation, when the atmosphere of the shop is made pure, its society refined and polite and all its features agreeable, the laborer will be relieved from the *intense* craving for stimulus.

In stimulating the digestive organs through the brain, we should recollect that the whole posterior basilar region contributes to their energy, and therefore we may reinforce them by applying the hands around the base of the brain on the level of the ear.

Let us now briefly review the functions accessible through the abdominal surface to imprint them on the memory.

1. At and below the lower end of the sternum — which would be called the epigastric region, we have Sensibility Somnolence, and the region of Impressibility, through which we exert a tranquillizing soporific influence, during which we may elicit the intellectual phenomena of trance, psychometric perception, clairvoyance, sympathy, and develope the curability of diseases by nervauric and spiritual influences. This region brings the patient completely under the influence of the operator. The corresponding cerebral region extends from the root of the nose to an inch behind the brow (marked S). The word Sympathy conveys a correct idea of the general tendency of this region. The sympathy is intellectual, emotional and physical and may amount to an entire surrender to the control of the operator. Those who are largely developed in this region easily become mesmeric subjects or fall into the class that are controlled by a word.

2. Just below the epigastric location, extending to the umbilicus and about two inches below, we find the region of assimilation and absorption, the influence of which is pleasant and soothing, harmonizing well with the soporific influence above, while promoting nourishment and digestion.

The influence of these two regions, especially the upper, is extremely amiable. The spiritual, psychometric and clairvoyant faculties are closely associated in the brain with the intellectual, amiable and sympathetic faculties. Hence there is generally a remarkable degree of refinement, beauty of sentiment and language, and kindly, benevolent and ethical teaching in connection with trance speaking and psychometry.

3. Below and around the umbilicus, exterior to the region of Assimilative Absorption is the region of Respiration, corresponding with the respiratory organs around the mouth and nose, of which I shall speak in connection with the thoracic organs. The corresponding cerebral region is marked R.

4. Below the umbilicus, half way to the pelvis, is the region

of Calorification by which we develop heat which is actively concerned in all fevers.

5. Below Calorification comes the uterine region, which might in a psychic sense be called the region of excitability.

6. Below the uterine region is the mons veneris or pubic region, which is associated with a tendency to lethargy and sleep and corresponds with the position of the urinary bladder.

7. On each side of the pubic region extends the groin or angle between the thigh and abdomen, which corresponds with the sexual secretions, menstrual and seminal. It is a part of the sexual region which includes the sexual organs.

8. Above the sexual region and in front of the hips (the anterior margin of the ilium) is the region of Melancholy. It antagonizes the region of Cheerfulness at the armpits.

9. Above Melancholy, on the side of the body, between the hip and ribs, is the region of absolute selfishness, which is antagonistic to every conception of duty to others and to all moral dignity. Its physiological influence is to reinforce the appetites and animal passions, and in some persons it needs stimulation to revive animal life and physiological processes. In predominance it may be called Baseness.

10. Just above the region of Selfishness, on the side, is the region of *Irritability* on the lower margin of the ribs, the effect of which if strongly excited is highly exciting and irritating. Dr. Beard, I believe, is the only electrician who has discovered and mentioned the character of this region. He says (p 343), "This sensitiveness is, of course, more in the thin and the nervous than in the corpulent and phlegmatic. It is usually most marked on the *inferior ribs on the right and left side of the body*, over the liver and spleen. The peculiar sensitiveness of the ribs at these points is sometimes erroneously supposed to indicate disease of the organs beneath them." It is a curious fact that Dr. Ferrier once struck upon the corresponding location in the brain without understanding it, when he enraged a cat by exciting the basis of the middle lobe.

Irritability belongs to the Phrenic Zone, through which we excite the diaphragm.

11. Anterior to Melancholy and Selfishness is the region of the Abdominal functions controlling the Alimentary canal, running from the margin of the ribs to Defecation, half way between umbilicus and groin. The upper end, relating to the stomach, corresponds to Alimentiveness. The lower location is marked D.

12. Anterior to Alimentiveness is the region of Disease, located along the margins of the ribs. Scientifically speaking it might be called the centre of organic sensibility, but practically it may be properly called Disease, as the tendency or liability to disease is proportioned to its predominance over the health sustaining power of the upper occiput and shoulders.

On this zone of the trunk is found anteriorly the maximum sensitiveness and maximum liability to injury. Brown Sequard found that animals killed by a shock through the diaphragm were killed more quickly and surely than when assailed through the head. In such cases the blood after death was fluid, the abdominal viscera congested, and the thoracic region nearly empty.

13. The remaining space between the Alimentive, Morbid, Respiratory and Sympathetic regions is a region of emotional impulse, or excitability corresponding to the cerebral region of Expression behind the face. It explains the sympathy of the brain with abdominal conditions. In the upper portion of this region of expression, which is adjacent to the sympathetic region — the emotional influence is of the amiable and soothing character. In the lower portion it is exciting and stimulating, partaking of the character of deep Respiration and Ardor. The therapeutic value of these organs consists in the soothing, yielding influence which is found on the surfaces above the umbilicus, and the more exciting or stimulating influences which are found below the level of the umbilicus, producing deeper respiration and greater warmth. The level of the umbilicus may be taken as as the division between the soothing and exciting influences of the abdominal surface.

Of the organs just enumerated, Calorification requires a full exposition, not only for therapeutic purposes, but as an illustration

of Physiology and Pathology. For the present, however, I shall speak of it merely for therapeutic purposes, reserving the physiological and pathological exposition for the second volume, the exposition of Electro-Therapeutics. Briefly, the Calorific function is located as to its origin in the brain, at the medulla oblongata, which we reach through the chin, and it is developed in the body by an influence passing down the cord and proceeding from the dorsal ganglia to the abdomen, in which it is developed through the ileum and is reached through the external location, between the pubis and umbilicus. Hence warmth is developed and diffused by covering the chin with one hand and the occipital base with the other, or by placing one hand on the hypogastric location of Calorification, and the other at the lumbo-dorsal junction. The anterior locations develope caloric, but the posterior assist and give it a more healthy diffusion.

The region of Coolness is on the sidehead, about the middle of the vertical line rising from the posterior region of the external ear, and on the body its location corresponds nearly with the middle of the posterior line of the arm.

Hence in treating a chill by the battery we pass a current from Coolness to Calorification, and in treating a fever we reverse the current.

Fevers may also be treated by a current of hot water poured on the lower abdomen, and typhoid fever is especially benefitted by this, as it involves disease of the small intestines. The great benefit of plunging the feet in hot water at the beginning of a fever is due to the influence on the hypogastric region and the diversion from the brain, as well as the sedative influences of the hot water.

The experiments of Brodie, of Chossat and of Heidenhain have fully proved the dependence of calorification on the nervous system, the origin of the power in the brain and the capacity of the nervous system, either to develope or to depress the health of any part of the body; but no one has heretofore discovered this corporeal seat of calorification or understood its relations to the brain. The nearest approach was in the much neglected

experiments of Chossat, who showed that Calorification was interrupted by sections of the splanchnic nerves and also by tying the abdominal aorta. Thus he came near completing the demonstration that Calorification is chiefly dependent upon the ilium in which fecalization is performed — the locality in which irritations and inflammations produce the most intense fevers. Fevers associated with abdominal disease at other locations have a lower temperature and less continuous heat. At the spleen the intermissions are much longer than the fever. At the liver the fever is remittent; at the stomach the temperature is lower (as in yellow fever); but when the hypogastric region is involved, the fevers are severe and continuous and the influence upon the brain greater.

In nervauric treatment chills would be overcome by applying the hands on the chin and the occipital base, or on the hypogastric region and lumbo-dorsal junction, or by manipulations from Coolness on the side to the hypogastric region.

Fevers should be overcome by dispersive passes from the hypogastric and hypochondriac locations and stimulating the regions of Coolness and Health. Some assistance may be given by the aquatic region on the tibial surface, especially when there is any inflammation. I think the tibial surface will be quite a valuable resource in eruptive diseases when there is much heat of the skin.

The LOWER LIMBS sustain important relations to the lungs, the brain and the vital force and developement.

The thigh, depending on the lumbar region, is the seat of the strongest animal power, and is the region through which to reinforce the muscular system. The locomotion and labor sustained by the frontal surface of the thigh should be roused by vigorous percussion whenever we wish to increase the physical strength. The lateral and posterior surfaces of the thigh are also highly invigorating but much more impulsive, bold and restless in their moral influence. Hence they are specially beneficial to those who are quiet and timid. The region of Vital Force at the summit of the thigh is beneficial in all cases of weakness. Its best effect is

produced in combination with the health region of the shoulders, or the region of Cheerfulness in the axilla. It also forms a happy combination with the region of Hope on the upper surface of the breast, above the nipple.

As we approach the knees, the crural influence becomes more decidedly restless. Hence the dispersive manipulations from the knees to the feet have an especially soothing influence. The posterior aspect of the thigh has the general character expressed by the word Turbulence, and hence cooperates with the criminal impulses when very large. The internal aspect of the thighs should not be stimulated except in those addicted to a very passive, ascetic life. Its tendency is toward dissipation, sensuality and vagrancy.

The upper posterior lateral surface of the thighs, the region of Nutrition, is almost always a necessary locality for the treatment of patients, for few are ever out of health without a deficient supply of red blood. Nutrition develops blood and flesh and moderates nervous excitability. It is quite convenient to excite Nutrition and Vital Force at the same time, by the hand or by the negative sponge.

Below the knee we find in the leg one of the great wonders of Sarcognomy. The leg corresponds to the pre-natal embryonic developement which illustrates the law of evolution and the microcosmal character of the human constitution. It corresponds to all below the grade of humanity — the animal, vegetable and mineral kingdoms.

It is easy to trace upon the leg the developement of the higher kingdom, the Vertebrata, which occupy the space between the knee and the ankle changing near the ankle to the mollusca, articulata and radiata. Upon the upper surface of the foot we have the vegetable kingdom, and on its lower surface the mineral kingdom, corresponding to the entire globe. Each animal of the vertebrata may be recognized at some portion of the vertebral region, and we might locate upon the leg, if it were of any importance, the dog, the horse, the shark, the whale, the eagle, the serpent, etc., and in the vegetative region the trees and herbage. But, laying aside the curious and wonderful, for practical utility,

we find in this representative microcosmal region some of the most important functions that modify life and control disease.

The vertébrata, divided into fishes, reptiles, birds and quadrupeds or mammalia, are represented in corresponding groups on the leg. The fishes and reptiles occupy the anterior or tibial surface exterior to the edge of the tibia; the next vertical section of the leg, extending just around the posterior exterior angle of the muscular prominence, is devoted to the birds and the remainder, the body of the calf, is devoted to the mammalia.

The consequences of this arrangement are very important—the anterior or aquatic surface corresponds to a lower grade of vitality and sensibility—a cold, unintellectual, unsensitive, uninflammable temperament. The aerial region of bird life is associated with a more active temperament, greater warmth and activity of respiration, while the mammalian region is associated with the greatest developement of animal life and a temperament more like the human, excepting its intellectual inferiority.

Hence, in stimulating the calf of the leg we reinforce animal life, very much as we do on the thighs. In stimulating the exterior aerial region we favor the activity and vivacity of the temperament; but in stimulating the aquatic region of the front we make an entire change of temperament, carrying it below the level of inflammatory and febrile diseases.

Below the vertebrate class of birds, there is not sufficient nervous developement to be capable of inflammation. The reparative power increases as the inflammatory capacity declines, so that wounds are healed and parts reproduced without inflammation.

In the vegetable kingdom, without a nervous system or intelligence, the reparative power is at its maximum, and inflammation and fever are impossible. Zoophytes are as free from inflammation as plants. Polypi may be cut to pieces and stuck together as successfully as plants may be grafted. Worms, too, may be cut to pieces and left to grow as separate individuals or stuck together to grow as one. Among the Articulata and Mollusca the reparative power is immense but the inflammatory ten-

dency imperceptible. Crabs, lobsters and young spiders reproduce their legs when torn off without anything like inflammation. The snail reproduces its head if the upper ganglion has not been destroyed. In the oyster and muscle the death and putrefaction of the body is not necessarily fatal to the animal. Fishes reproduce their lost fins and heal all their wounds without inflammation or suppuration. Lizards, serpents, salamanders, frogs and toads have great reparative power without inflammation. The lizard even reproduces its tail. Prof. Macartney removed part of the brain and skull of a toad which was healed without inflammation. It is in birds that we first find the nervous system sufficiently developed to be capable of inflammation. Quadrupeds are still more liable to inflammation. The maximum inflammatory capacity with the least restorative power is found in man.

But as man in his embryonic life passes through the lower forms of life, it is only after the second month that he attains the inflammable constitution, but the lower elements which existed in the embryo continue to exist in the matured form though overlaid and concealed by the higher powers, and the mature man retains in his constitution the elements which sympathize with all animal life, and which sometimes come to the surface, as in the barking and biting of hydrophobia and the imitations of animals practiced under a species of religious insanity at camp meetings in our early history.

Sarcognomy has brought out these buried elements of embryonic life and given them a definite location on the legs, corresponding perhaps to the summit of the spinal column and portions of the base of the brain.

The utility of the discovery is this: If the impressible subject can be carried back to the aquatic form of cold blooded life by exciting these organs on the body *he may be carried below the stage of inflammation and fever.*

This, I believe, is one of the most important discoveries ever made in pathology and therapeutics, for in all very impressible persons the aquatic location may be excited until they feel the mental stupor or vacancy of mind, the blunted sensibility and the

inclination to an aquatic life. They say they feel like lying down or floating in the water. The respiration is greatly diminished as well as the mental action. The lungs not only become quiet, but lose their irritability, and all inflammatory or irritative conditions of the lungs are subdued.

The aquatic region of the leg, then, is the region to which we must look for the cure of pneumonia and bronchitis and the alleviation, if not cure, of consumption, by stimulating plasters on the tibial region or by Galvanic currents with negative rheophores on the tibia or by manipulation.

The tibial surface of the legs, then, is the counter-agent of the lungs and to a considerable extent of the brain. As we go down the leg the antagonism to the brain increases, and on the upper surface of the foot mentality is arrested and respiration also, in proportion to the strength of the local influence. Thus does the diseased organ secure a tranquil rest and freedom from inflammatory action. I would be much obliged to nervauric healers for exact accounts of cases of pneumonia and bronchitis treated on these principles as evidence of the extent to which they are applicable. The experience of my pupils already is sufficient to authorize me to speak with confidence.

The aquatic influence may subdue the inflammatory condition in the lungs, but we need a more active process to disperse the congestion, which is the most formidable difficulty and this we have in hemastasis. Ligatures around the thighs and shoulders, compelling the limbs to swell with accumulated blood, will infallibly deplete the congested lungs.

On the other hand when the lungs, instead of being oppressed with inflammatory congestion are feeble, anemic and lacking in depth of respiration they are benefitted by stimulating the thigh, and calf of the leg, as well as the pulmonic locality in the dorsal region.

The entire foot is the anti-cephalic region — the bottom of the foot corresponding with the mineral region and producing a feeling of dullness and extreme heaviness. Hence protracted Galvanic currents to the soles of the feet are liable to produce depressing and injurious influences. A current from the soles of the feet to the shoulders would be of much greater general utility.

CHAPTER XII.

PELVIC FUNCTIONS AND ORGANS.

Lumbo-sacral Region. Importance of sexual developement. Its effects. Injury by deficiency. Its influence for Health. Centres of Love—spiritual and physical. Difference of the Sexes. Sensibility of the womb. Value of treatment on the back. Use of Helouias. Medical quackery. Inguinal region. Uterine region. Region of Sanity and Chastity. Sexual excitement, its control and its seat in the brain. Pathological cases illustrating its location. Influence of virility on Health and Vigor. Health as a cooperative. Centre of cerebellum as a reinforcement of Vitality. Treatment of the eyes. Anatomical reference. Pathological relations to Insanity and Nausea. Morbid tendencies of the basilar and pelvic organs. The true nature of Insanity. Its location in the brain and the body. How Insanity is to be cured by treatment on the body and the brain. Counter-irritation on the back of the neck. The hypochondriac region concerned. Location of Nausea on the body. The colon, cholic, nausea, vomiting and diarrhoea. Nausea of pregnancy. Influence of Nausea. Method of its treatment.

NEXT to the region of vital force at the posterior summit of the thigh, we should consider the region of sexual life and development at the junction of the lumbar vertebræ with the pelvis in the portion called the sacrum — at the lower end of the backbone, to which the hips are united.

Sexual developement is essential to the completeness of every being. Sexual and parental relations require a higher development of the faculties, virtues and energies than a non-sexual existence. They require Adhesiveness, Familiarity, Love and delicate sympathies between two persons — consequently a higher developement of refinement and virtue, to make the relation attractive, pleasant and permanent. The parental relation which follows sexual love demands an additional developement of the virtues and energies to meet its requirements properly. Hence the mammalia or animals that nourish their young by the maternal milk and give

them prolonged care stand at the head of the animal kingdom.

It is, therefore, wisely ordered that sexual developement in both man and woman, but more especially in woman, shall produce an increase of Vital Force. Adhesiveness, Love and Health, according to pathognomic laws to be explained hereafter.

Such being the case, sexual developement is one of the most important incidents of human life. It develops in both sexes refinement, poetic thought, imagination, amiability, social attraction, desire to please, health, animation and courage, which qualities produce a more perfect developement of the person, a more vivid expression of the countenance, improvement in the voice, in the eye and in the manners.

A retarded or unhealthy developement of puberty is a great injury to the female constitution, and throughout life woman's health and happiness depend greatly on the sexual system.

The sexual functions, therefore, cannot be neglected in nervauric treatment, or in the conduct of life. The man or woman who has not attained full sexual developement is a barren object, like a plant which has never bloomed, which has neither the beauty and fragrance of flowers, nor the benevolence of fruit, nor the possibility of a new life springing from its own. It is a meagre and unripe condition of humanity in which the sexual evolution is hindered, as we see illustrated in the difference between castrated and natural animals.

Sexual developement is the last and highest stage of growth, which changes the rude boy into the attractive and dignified gentleman by perfecting the physical constitution and adding thereto the moral energy and warmth which fit him for society by attractive manners, and for the more important duties of life by an exaltation of the kindly emotions and the sense of duty and responsibility. It is true that *mere* sexuality as a controlling power becomes a vicious impulse in its abnormal action, but I speak of its normal action, according to the law by which the inferior sustain the higher faculties, as when Vital Force sustains Firmness and Heroism.

In repressing sexual evolution, whether by castration or by rigid authority and ascetic manners, we exert a degrading influence, impairing social harmony and happiness, and bringing life nearer to a basis of absolute selfishness. We are marring the Divine image in man, and assuming superiority to the Divine wisdom.

Love is the world's saving, uplifting and perpetuating power, and in the sexual plan of humanity the Divine wisdom has secured its permanent presence and power. All attempts to amend or control the Divine plan arise from a lack of true religion — a lack of the reverence, love and faith which appreciate the Divine plan of nature, allowing the entrance of censorious disgust where admiration of the Divine plan should exist. Actuated by this disgust religious sects have assumed to crush human sexuality as a noxious weed, and compensate for its absence by extra cultivation of religious sentiments. The sincerity and fervor of their efforts cannot be denied, but they have fallen short of the physical, social and moral developement to which they aspire, for they are thwarting a plan that is wiser than human inventions. It is impossible that eunuchs or ascetic celibates should embody the highest type of humanity, either physically or morally; which is developed only through the predestined plan of love and parentage.

These considerations are not foreign to the subject of nervau-ric treatment, for it includes the sexual functions, and they are a very important part of the vital forces that maintain health and happiness. Love is correlative with health and perfection; it is attracted by physical and moral perfection in another, and it is the most powerful means of developing that perfection in its object. All the virtue of which man is capable is developed in the home in which he enjoys the sunshine of a woman's love, and all the happy energies, virtues and health of which a woman is capable are developed in the warmth of a devoted husband's love. This love, like all that constitutes humanity, has both its physical and its spiritual operation, and is beneficial and necessary alike in both. Perfection is not attainable without the full developement, and the normal life of the fully developed, in a perfectly harmonious con-

ugal relation. Such relations as the world goes are seldom entirely harmonious, but a full developement of the love nature in either party goes far to overcome all evils and secure contentment and health, where, otherwise, there might be gloom and misery. The refined and tender gallantry developed in man by sexual love is necessary to the happiness of woman, and the all yielding, all devoted sentiment which it develops in woman, not only gives to her husband the cheerful content which is necessary to perfect health, but develops in herself a happiness and a moral strength which sustain his physical constitution and resist the decay of age.

Sexual love has two controlling centres: the lumbo-sacral, which controls and sustains the sexual organs, and the mammae, on the front of the chest, which correspond to the organ of Love in the brain (just behind the coronal suture). The lower organ inspires the impulse to personal familiarity, fondling and contact, the upper produces admiration, sympathy, tenderness, devotion, service and fidelity, which in their highest degree might be called worship. The familiarity and the devotion are not exclusively sexual, but their chief manifestations are found between those of opposite sex. In parental love the difference in sex has less influence, though certainly not absent.

The superior love has an animating, inspiring influence over the whole moral nature, for love heightened to adoration is the essence of all religion, and the inferior faculty has a similar energizing influence on the whole physical constitution, and these two elements are so closely linked by the Creator as to make their joint developement a necessity, for neither can attain its maximum power without the full developement of both.

The larger developement of the mammae in women corresponds to their higher developement in love and their consequent superior control by the moral nature, which is too obvious to require illustration. It is so very marked that the same exterior configuration of the head will produce better results in women than in men, because in woman there is a greater activity in the coronal region of the brain than in man. The same external form of skull which in a male would authorize me to pronounce him most

probably a criminal would not authorize such an opinion if it were that of a female.

The sexual organs in a woman are very closely associated with the developement of the mammae, and the loving emotions of which they are the corporeal seat. Pregnancy brings on the developement of the mammae, and the secretion of milk, and stimulation of the mammae promotes the developement of menstruation.

The sexual conformation is different in man, and it has a much less intimate association with the higher love (which is explained by the laws of Pathognomy). Hence, in woman love is more spiritual and devoted — in man more physical, passionate and impulsive. But in each sex its intimate relation to Vital Force is apparent, since the sexual apparatus is in various degrees associated by its nerves with the whole lumbar and sacral regions upon which the lower limbs depend. Hence in the sexual derangements of women (and such derangements are pretty sure to follow unnatural repression or inharmonious life) great weakness of the limbs results, and sedentary habits (if not absolute repose) become necessary, while the entire nervous system is greatly deranged.

The womb is such a centre of excitability, sympathy and sensitiveness that it is easily affected by a thousand physical and moral causes, and hence there are very few women who have positive sexual health. The great majority of females need treatment for some form of sexual derangement. Even many who think themselves in health (because they do not know what perfect health is) need this nervauric treatment, which produces far better results than the common drug practice. The old style of drug practice on women was so crude, so barbarous and so wretchedly meagre in its resources as to be responsible for a vast amount of human suffering; and its consequences transmitted to this generation.

In the majority of females, whether married or single, five or ten minutes of dispersive passes on the lumbo-sacral region will help to remove morbid conditions. Following this, the application of the hand to vitalize that region will have an admirable restorative effect. Nature has furnished us, in the *HELONIAS dioica* a

nearly specific tonic for this region, and the fluid extract if applied as an embrocation on the skin of the lumbo-sacral region or used as a vaginal injection diluted with thirty or forty parts of tepid water will powerfully aid the restoration of health to the sexual apparatus of woman. It has, moreover, a fine influence on the brain, the stomach and the entire constitution, and ten or twenty drop doses by the stomach will produce its constitutional effects on all parts if used from one to four times daily. A popular knowledge and a general use of this remedy would have done more for the health of women than all that has been done by the medical profession with the exception of the modern treatment of enlightened and liberal physicians.

In addition to invigorating the lumbo-sacral region, it is almost always quite necessary to use dispersive manipulations on the inguinal region or seat of sexual profluvia. This is especially necessary in cases of menorrhagia and dysmenorrhœa, and in males, in cases of spermatorrhœa or sexual weakness and relaxation. I know of no cases in which I have deemed the stimulation of the inguinal region necessary, except in amenorrhœa, in which it might be roused with the lumbo-sacral region, but not alone. The trouble from dysmenorrhœa at the catamenial periods is in general easily relieved by one or more doses of Hayden's Viburnum Compound, which should be kept on hand by women who need it.

The uterine region above the pubes and below the umbilicus, also needs stimulation, only in cases of retarded development or amenorrhœa. In the majority of cases it needs dispersive treatment to procure nervous tranquility — as it is the seat of that excitability which causes excessive emotional activity, and at length appears as hysteria. Hysteria will be readily controlled by dispersive passes from the uterine region upward and backward, for it is a condition of Impressibility which readily responds to nervauric treatment. I do not deny however that the uterine region may receive an increment of health from the hand of a good healer, especially if the other hand be kept on the region of Health on the shoulder blade.

In tranquillizing the sexual system the best treatment is by

dispersive passes over the uterine and inguinal regions upward and backward toward the armpits — then placing the hands just below the arms, on the side of the chest which covers the region of mental soundness and tranquillity, which has been marked on the bust as the region of Sanity — a region antagonistic to all abnormal excitement and nervous depression. The posterior part of this region running into Coldness, may properly be called the region of Chastity, as it antagonizes sexual excitement. In cases of inordinate sexual desire with nymphomania or priapism, the region of Chastity should be excited, and dispersive means used at the uterine inguinal and lumbo-sacral regions. The dispersive treatment may always be reinforced by bathing or sponging with hot water. This sexual excitement has its cerebral seat at and below the occipital knob, in the superior and central portions of the cerebellum, at which location the sexual power may be reinforced by stimulation, as the sexual excitement may be subdued by the application of hot water or by the *prolonged* application of ice or of ether, which produces great coldness by its evaporation.

Sexual functions are certainly performed by the sexual organs, as forcible motion is effected by muscles, but in each case the controlling power is in the nervous system. The sexual parts depend upon their nerves, they upon the spinal cord and the spinal cord upon the brain. Hence strong sexual excitement may be produced by a thought, but congested or hyperemic conditions of the sexual organs, even to priapism, may fail to excite any sexual passion, as its seat is really cephalic. On the other hand, the most morbid or destructive conditions of the sexual organs do not destroy the sexual inclinations. They have been manifested by women (according to Richerand and Gall) in whom the womb was entirely absent and others in whom the womb and vagina were in the last stages of disease. Prof. Caillot relates one of these cases in which the womb was entirely absent.

(M. Serres reports a case of apoplexy with priapism, in which the autopsy revealed inflammation of the central superior portion of the cerebellum, extending along the connecting fibres to the quadrigeminal bodies.

In another case (of a robust day laborer) of apoplexy and satyriasis, with

It is not merely in reference to the sexual organs themselves that we are interested in the lumbo-sacral region of virility, but in reference to general health and development also.

When we are stimulating the region of Health on the shoulders or on the head we add a large amount of physical power by acting on the region of Vital Force on the thigh, or on the base of the brain behind the mastoid process — an addition which may be very important to those exhausted by disease or those naturally deficient in vital force.

In like manner the lumbo-sacral region may be used for the reinforcement of vitality as a controlling centre for the pelvis and lower limbs. Its influence is not like the region of Vital Force, concentrated on the muscular and locomotive energies, but extends

repeated emissions, the cerebrum was natural, but the *cerebellum* exhibited the most extreme inflammation in the central superior portion (looking as if it had been macerated in blood) and there was a small cavity in the right hemisphere.

In a third case of apoplexy (of a man forty six years of age), accompanied by convulsive movements and satyriasis, with heat and swelling of the genitals, the cerebellum was large and its upper surface of a lively red, indicating inflammation, which extended along the process to the quadrigeminal bodies, which were also inflamed. This inflammation of the upper surface of the cerebellum was highly advanced along its superior central portion, in which cavities were just beginning to be formed.

In the fourth case, of a man named Gambier, apoplectic and unconscious, the limbs of the right side were entirely paralyzed, and this was explained in the autopsy by the effusion three inches long and one inch wide in the left corpus striatum. The limbs of the right side presented spasmodic contractions, and priapism continued to death. The latter was explained by the condition of the cerebellum, "the cerebellum, and especially the *superior vermicular process*, presented numerous little effusions of the size of a grain of hemp seed."

These and other similar cases show as clearly as Pathology can that the central and superior portions of the cerebellum are concerned in the sexual functions, and the seat of inflammation in priapism or satyriasis. Inflammation and destruction of other portions of the cerebellum proceed most commonly to paralysis, but without sexual disturbance.

After I had located the sexual function by experiments below the occipital knob, it was very satisfactory to find that Pathology so clearly confirmed what I had discovered.

In a case of extreme nymphomania in a woman, Josephine Dubourg, lasting through many years, and accompanied by insatiable excesses, the autopsy showed what might have been expected, chronic induration of the central portion of the cerebellum, with some small incipient ulcerations; all around this central portion the cerebellum was inflamed and harder than natural, and the arteries of the cerebellum were unusually developed, as well as the arteries of the pelvis.)

to the entire nervous system, like the developing influence of puberty, which in man is probably effected through the seminal secretion. Sexually speaking its influence develops not voluptuousness, but virility. Therapeutically, it is reanimating alike to the nervous and muscular systems. Hence the combination of lumbo-sacral virility with the animating Health of the shoulders — either on the body or on the head — is often the very best thing that can be done to develope normal and useful life.

In rousing the various organs which need restoration, it is expedient to develope simultaneously the influence of Health which always makes a beneficial regulative influence. Thus in stimulating the gastric region with one hand, if the other be located on Health, the resulting effect on the stomach is very beneficial — the restorative influence of Health being sent to it as the soothing influence of morphine goes to the organ that is in pain.

When organs are languid or lifeless from weakness or exhaustion, the lumbo-sacral or cerebellic influence may be used to assist in their restoration. Thus in almost all cases of weakness of the eyes they may be invigorated or reanimated by placing the fingers of one hand under the occipital knob on the centre of the cerebellum, and the other across the brows.

The precise central seat of the sense of vision is at the base of the front lobe just above the pupil of the eye, and if the fingers or thumb and fingers are applied to this spot it will stimulate the visual power, while the animation derived from the centre of the cerebellum will greatly increase the effect. But as all the convolutions of the brows contribute to aid the sense of vision, it is well to extend the outer margin of the hand across the brows.

Perhaps the anatomical arrangement may help to illustrate this result. The sexual portion of the cerebellum is connected by continuous fibres called the *processus e cerebello* with the quadrigeminal bodies which are the origin of the optic nerve, and are called the optic lobes, and in applying the fingers as above described this whole tract from the cerebellum to the retinæ is included between them.

Let us now consider the pelvic region in its pathological relations which are of great importance.

The lower margin of the pelvis has pathological tendencies as strongly marked as the hypochondriac regions — the hypochondriac influences being adverse to physical health and vigor — the pelvic to mental soundness and the strength of the nervous system. I must repeat again to avoid misconception that no organ is to be regarded as an unhealthy or injurious element of the constitution — all organs being constructed for necessary purposes. But such tendencies arise from negative causes — from the absence of the controlling forces which keep the organs in their proper sphere. The evil influence connected with any organ is that which arises from its uncontrolled predominance in the constitution, and they arise whenever its developement is excessive or its antagonists are deficient.

The sexual organs, for example, produce in their excesses an utter prostration of the nervous system, of which we may see a terrible picture in medical writings upon masturbation, licentiousness, spermatorrhœa and sexual diseases. The mental and physical prostration that arise from such causes are due partly to the intense sensibility in the pelvis and hypochondria, partly to the character of the secretions, which are extremely exhaustive, and partly to the influence of the excretions of the rectum and bladder — partly, also, to the anti-cephalic character of the leg and foot in association with the sacral region of the spinal column.

Mental derangement, shown as monomania, idiocy, melancholy, peevishness, ill temper, childishness, hallucination, etc., depends primarily upon the failure of blood supply and circulation in the brain, which becomes enfeebled like all other organs, under such failure, and becomes softened in structure so as to be incapable of any vigorous action. The tendency of all the basilar organs in predominance is in some degree insane, as they divert the circulation from the brain, and the majority of the human race are and ever have been very far from Sanity. It is but a few years since the most enlightened and advanced nation on earth was en-

gaged in the horrible insanity of civil war, and this homicidal insanity still prevails among all the great nations.

While all the basilar forces in predominance are insane in various degrees, the maximum insane tendency is in front of the vertical line between the front and back, where the sensitive excitability attains its maximum and where we apply the term Insanity, because that is its effect in predominance.

The excessive excitability and irritability of this region, operating on an enfeebled circulation, causes the most extreme irregularities in different parts of the brain, congestion, hyperemia, anemia, etc., destroying the mental balance and soundness of judgment, as when one is under the influence of extreme despondency, hallucination or rage. The slightest influences over-power the mental energy of any organ in this condition, or excite other organs to wild excess, and under the influence of unbalanced feelings the judgment loses all correctness.

The developement from which this excitability comes is in the basis of the brain, at the entrance of the carotid arteries, and its external indication is under the jaw, where the carotids and jugulars pass, and where the superior cervical ganglion controls the anterior cerebral circulation. The corresponding location on the body is at the perineum between the thighs — a centre of depraving influences. Here we have the passional force and the turbulence of the thighs; the hostile passions of the buttocks; the stupefying influence of urine and feces; the brutality of the leg, and the mental torpor of the foot which belong to the sacral region, with the passional excitability of the sexual organs, which is most conspicuous in hysteria — all of which are intensified in effect by conditions a little higher up — the prostrating melancholy of the upper inguinal region, and the intense nausea of the sacro-iliac junction. Under these combined influences we have every degree of mental prostration, dementia, gloom, rage, idiocy and incapacity to entertain a rational conception.

The therapeutic consequences of this discovery are immense, and I earnestly entreat the superintendents of insane asylums to test the discovery in their treatment of the insane.

The therapeutic indication is, that when we can transfer the vital action from the base of the pelvis, or insane region, to the region of sanity on the thorax under the arms, or on the spine at the dorsal summit INSANITY will be cured.

The cure may be effected by restoring the pelvic organs to health — securing free and healthy action of the bowels by *soothing, alterative aperients*; restoring the womb, chiefly by Helonias, and the urinary organs by Hydrangea and Epigea, to which Flowers of Lavender make a good addition, and sending vitality from the perineum to the region of Sanity by Galvanic currents, the patient sitting, as on a saddle, on the positive sponge, or a metallic tube or rod, or a seat with a metallic centre-piece like a saddle, while negative sponges of large size are applied in the axilla, and occasionally on the summit of the dorsal region. Of course no one would expect a chronic condition to be removed by a single Galvanic application, or by anything less than a protracted treatment. In some few cases the effects would be prompt and marvelous — in the majority they would come slowly, at least as long as any organic derangement in the body remained.

In giving the nervauric treatment, passes should be made from the coccyx to the summit of the spine, and from the groin and inside of the thighs to the axilla. At the same time the Hygienic current should be used, for general health is needed to sustain the health of the brain. That is given by a current from the hypochondria to the centre of the shoulder-blade, or by passes in that direction. The positive pole should be applied at and behind the location marked Disease.

But may not Insanity be treated directly at the brain? Assuredly it may. Currents may be passed from the under-jaw space, just in front of the carotids and jugulars, to two corresponding points — one on the sagittal suture, where the organ of Firmness is located, and the other parallel thereto, on the temporal arch in the middle of the parietal bone — its central point of ossification in the fetus and infant.

The current may be from a battery of five to ten cells, applied on both sides of the head simultaneously by large sponge rheophores.

In nervauric treatment, passes from the region of Insanity to the crown of the head, and the application of the hand on the hygienic region would be proper. At the same time dispersive passes downward on the neck over the insane region and similar downward passes on the back of the neck would be proper.

There is an insane region, externally located on the back of the neck, on the median line just below the basis of the cranium, on which dispersive passes are beneficial and on which physicians have often found counter-irritation very useful in cerebral disorders. Setons, blisters and irritating plasters on this location withdraw diseased conditions from the brain. The brain may be greatly soothed and benefitted in morbid conditions by applying the positive sponge on the insane location at the lower angle of the jaw just in front of the lower part of the ear, or on the cervical location just mentioned (which affects its posterior half) the negative being applied at the shoulder or axilla, or in the hand — or if there is an inflammatory condition, on the tibial surface of the leg.

The hypochondriac region cooperates efficiently with the lower pelvic in producing insane conditions. Hence it is highly important to rectify the conditions of the liver and stomach. The liver especially, has much to do with mental depression and mania.

There is another pelvic influence or function which has been up to the present time almost as much of a mystery as Insanity. I refer to NAUSEA — a condition which has never been located or explained. Sarcognomy shows its location at the sacro-iliac symphysis externally, which corresponds internally with the two ends of the colon, its origin from the ileum on the right side and its sigmoid flexure, connecting with the rectum on the left. The colon is the chief seat of nausea. Its disorders, called cholics are characterized chiefly by nausea and vomiting, as well as great mental depression, which is explained by the location of melancholy just in front of the ilium.

Lead colic, which is accompanied by an irritated and contracted condition of the colon, develops the functions shown by Sarcognomy, melancholy and defecation, or desire to empty the

bowels, being in front of the colon and nausea behind it. Hence the attack comes on with desponding wretchedness and mental prostration, and a nausea which increases till it produces vomiting, while the desire to evacuate the bowels is tormenting. The nervous depression is so great as sometimes to result in paralysis of the upper or lower limbs or tongue, or of the forearm. The whole pelvic region has this paralyzing tendency, which is at its maximum in the anterior part of the insane region. The pain extends to the small of the back, and produces great restlessness. Vomiting gives only a momentary relief — the depression and weakness continue.

Bilious cholic is also accompanied by nausea and vomiting. But in both affections there is no elevation of temperature, but rather a coldness, as this irritation diverts from the calorific region, whereas the irritations of the ileum, which is in the calorific region, are accompanied by high fever. The existence of feverish heat and thirst distinguishes inflammations of the small intestines from cholic or affection of the colon. Diarrhoea and cholera, which are affections chiefly of the colon, are also accompanied by nausea and vomiting — sometimes quite protracted.

Nausea and vomiting arise from all severe affections of the colon, and may even be caused by harsh purgatives. Obstruction of the colon by fecal matter or by strangulated hernia necessarily results in nausea and vomiting, and even an adjacent irritation may extend to the colon and produce nausea, as we observe in the early stages of pregnancy. The external location of Nausea, the sacro-iliac symphysis, corresponds to the internal iliac artery for the pelvic region, from which the pudic artery proceeds, supplying the reproductive organs, and establishing a vascular as well as nervous connection, and connection of proximity with the colon and rectum.

With this location of nausea, what are its physiological and therapeutic bearings? Physiologically, its influence is prostrating to the brain, but not to physical life. Emetics are depressing, but not dangerous.

Animal life of a gloomy character is promoted by nausea, and as every thing in the sacral region has a relation to the lower limbs, especially the legs, nausea is a powerful means of subduing inflammatory and irritated conditions of the brain and chest, though not so comfortable as the tibial region of the leg. Hence it is that nausea is a familiar reliance in treating the lungs to take down inflammatory conditions and promote expectoration: — most expectorants are nauseants.

Therapeutically, we learn that nausea is to be treated on the lower part of the back by vigorous dispersive passes which may be assisted by upward dispersive passes in front from the same level — from the hypogastric and hypochondriac regions.

When this principle is understood, seasickness will be conquered by positive currents from the region of Nausea to Health — to the top of the shoulder and to the upper frontal surface of the chest as low as the nipple.

As the philosophy of Insanity and Nausea has never before been known or suspected, I would request those who verify these principles in treatment to send me a report of their results.

CHAPTER XIII.

ANIMAL MAGNETISM REVIEWED AND RECTIFIED.

Its marvelous phenomena. Opposition of materialism. Its unscientific character. Sarcognomy. Delenze's Practical Instruction. His erroneous theories corrected. His formula for magnetizing. The scientific method of producing the results. The localities on the head and the body. The evil effects of the unscientific method. Effects of the downward passes. Superiority of the upward. Nature of the magnetic seance. Blind empiricism. The improper method of removing pain or disease. Prevalence of contagion. Use of the breath and of water. Method of waking. Use of magnetized water. The baquet. Exalted powers of Somnambulism. Their source and philosophy. Explanation of the power of operators and best methods. Blind routine of magnetizers. Failure of the medical profession. Hartshorn's translation—its valuable testimony. Mechanical ideas of the medical profession. How to produce insensibility. Testimony of Cuvier, LaPlace and Georget. Corroboration by Psychometry. Treatment of Dr. Elliotson in London. Cloquet's operation in the magnetic state. Clairvoyance of Miss Brackett. Duty of the disciples of truth.

THE nervauric treatment of disease, heretofore practiced under the name of ANIMAL MAGNETISM, which was so famously illustrated by Mesmer as to cause many to give it the name of Mesmerism, has achieved a vast amount of curative results in disease, and marvelous phenomena in the developement of human intuition through Clairvoyance and Somniloquence. The vast amount of its benevolence and the jealous hostility of the great mass of the medical profession, notwithstanding its well attested cures and the numerous learned and brilliant volumes in which its claims have been set forth, are a sad illustration of the moral condition of the present century.

The greater part of this opposition has been owing to the resolute, unyielding spirit of materialism which has dominated in all scientific circles; but a considerable part, also, has been due to the fact that Animal Magnetism, as taught and practiced, has been

purely empirical and has never attained the status of a science or been cultivated in a thoroughly scientific manner.

The marvelous effects produced on the human constitution were never traced to their source in the brain and the body ; and as when the causes of phenomena are unknown and unsought, science does not exist, the whole subject becomes puzzling, embarrassing and repellent to minds accustomed to the mastery of positive science.

If the *rationale* of clairvoyance and somniloquence had been discovered, if the philosophy of magnetic cures had been made clear, and if the marvelous powers exercised over the magnetic subject had been used to unfold the mysteries and localities of the vital forces, so as to give command of all vital functions, philosophic thinkers would have found in the science an irresistible attraction.

SARCOGNOMY is the result of the scientific method applied to this investigation, and enables us to review the operations and correct the errors of the cultivators of Animal Magnetism. To perform this task briefly and bring the chaos of benevolent empiricism under the jurisdiction of science, let us look at the instructions of Deleuze, the learned and benevolent expounder of Animal Magnetism.

His volume of "Practical Instruction" opens with the statements of principles which he pronounces essential and invariable, viz. : that man exercises a salutary influence over his fellow-beings by his will, which is called *magnetism* — that the first condition of the operation "is to exercise the will" — that this will operates through something called the magnetic fluid, and that "the direct action of magnetism ceases when the magnetizer ceases to will," and that "magnetism generally exercises no influence upon persons in health."

This is but a collection of errors. The vital emanation or nervaura which has been called animal magnetism, proceeds continually and unconsciously from every human being and tends to impress his influence, his mental and physical characteristics, on all with whom he is in contact or approximation. We see this in

the diffusion of smallpox and virulent fevers, in the contagious influences that rule public assemblies, and in the assimilation of those who associate together. We see it especially in the power of the healing presence of a benevolent physician, who cures without medicine and without contact, which has been the method of some of our best healers. It is realized whenever the hands are placed upon a patient, whether there be any purpose or not, and in all my experiments for developing the faculties, passions and vital forces in which the nature of the sensitive is for the time being revolutionized or subjected to the domination of various passions, such as pride, religion, sympathy, fear or anger, I have always carefully avoided any exercise of will, or any desire to influence the results, and have instructed my pupils accordingly. The influence of the hand is sufficient apart from will. And yet a determined influence of the will must influence a passive sensitive, and therefore may add materially to the result. But that the nervaura exerts no influence on persons in health, is an astonishing statement to come from so intelligent and respectable a source. All mankind are susceptible in various degrees to the influence of the nervaura and the will; and I have often found a higher susceptibility during health than in disease. Some diseases enhance and others diminish the susceptibility.

Deleuze next describes his process of magnetizing, which is little more than the general or extensive application of the operator's hands to the person of the subject, by gentle touches and passes, while the patient sits in a passive condition with nothing to attract his attention but these manipulations, while he rests in the state of self-surrender which is enjoined. His first direction is quite trivial and unimportant, "take his thumbs between your two fingers so that the inside of your thumbs may touch the inside of his. Remain in this situation from two to five minutes, or until you perceive there is an equal degree of heat between your thumbs and his." This is a puerile formula. The impression to be made by the operator's hands can be much better made by applying his whole hands to the inner surface of the patient's, the tendency of which would be to establish sympathetic connection and influence.

But the whole magnetizing procedure, thumbing, passes, hand-shaking, etc., is a crude, partial, unscientific method. The application of the operator's hands upon any portion of the anterior surface of the chest would have a better effect. Still better would be the application of the hands on the top of the head, anteriorly and laterally, which would produce an amiable and submissive feeling.

The whole object of the magnetic seance of half an hour or an hour is to produce the passive, sensitive condition which yields to all influences, and may gradually pass into a state of Somniloquent trance, and it is a practicable, though tedious way of effecting it. Deleuze recommends the first seance to be for an hour, and if no effect is experienced to continue treatment for a month. But the object desired may be attained frequently in twenty minutes. It is the evolution of functions which belong to the region behind the eyes, where the front and middle lobes of the brain come together — the regions of Sensibility, Impressibility and Somnolence. If the patient is sufficiently sensitive to be materially affected by the passes of the operator, he can certainly be affected by the direct application of the hands to the organs to be roused. The application of the fingers upon the temples, an inch behind the brow, will produce in a few minutes the same effects which the magnetizer seeks by the tedious formula of magnetic passes which Deleuze minutely describes. If the fingers are accurately placed upon Somnolence, the effect is revealed in a few minutes by the winking of the eyes and disposition to close them. A thorough sensitive will in a few minutes be brought into the somniloquent trance — others may only realize the soothing effect. If the fingers are placed a little further back, the effect will be a developement of Sensibility and Impressibility which will render the subject more amenable to local treatment and to the action of delicate remedies. It will also bring him sympathetically under the influence of the operator's constitution, or will, if need be, as well as the tedious processes of Deleuze. Without touching the head, however, the whole results of the magnetic seance may be developed by placing the hand at the lower end of the sternum, extending down on the median line from four to five inches. The

entire space between the umbilicus and sternum is a region of soothing, sympathetic, somnolent influences which the magnetizer endeavors to develope, not by operating directly upon their seat, but by applying a general treatment. He who would attempt to develope a particular note in the piano by pounding the framework instead of touching the proper key would commit a similar error.

In the Deleuze process the hands are moved to the level of the head, placed on the shoulders about a minute and drawn lightly down to the tips of the fingers, "touching lightly," then placed on the head a moment, brought down before the face at a distance of one or two inches, as far as the pit of the stomach — then slowly down to the ends of the feet. Then repeat without touching the head, but "shaking the fingers" at the end of each pass, and end by making transverse passes at a distance of three or four inches before the face and before the chest. Passes may also be made from the shoulders down the back, hips and thighs.

Much of these directions are arbitrary and fanciful. Passes along the median line down to the epigastrium are, however, appropriate to the purpose, and in the most sensitive may be effective but not so prompt and efficient as the direct application of the hands to the epigastrium. In these passes mistakes are frequently made by applying an influence to the hypochondria. Deleuze himself says; "Sometimes the patient experiences pain at the stomach and nausea which is even followed by vomiting; at other times he experiences cholic pains, and sometimes desires the sitting suspended because he feels a species of irritation," all of which shows the injurious effects of downward passes to the hypochondria and the abdomen generally, prompted by the mistaken dogma that the downward are the only magnetic passes. It is very remarkable that this was never discovered and that neither electricians nor magnetizers had any conception of the pathological tendency of the hypochondria, although they often brought out its pathological influence and electricians, as Althaus and others, have been compelled to desist from operations in the hypochondriac region, yet there was never enough of the spirit of investigation to discover the local cause of the injurious results produced.

Deleuze says that the patient must "not be in the least alarmed at any crisis or transient indisposition." Magnetism "*frequently brings on very sharp pains.*" These pains prove that it acts powerfully; they are necessary to subdue the disease. If, then, you experience sufferings, you will have the fortitude to bear them without speaking of them to any one. You will not even ask your magnetizer to calm them. If you have not beforehand taken the firm resolution of resisting the first pains that it causes you to feel — if your magnetizer has not confidence and force of character enough not to be alarmed about them, it would be better for you not to commence. I acknowledge that magnetism has been known to excite a nervous irritation and an uneasiness which continue after the sittings without being followed by any crisis."

These frank admissions are just what we should expect from his adhering to the dogma that *downward passes* alone are beneficial (which is entirely false), and prosecuting blindly his regular routine without inquiring or wishing to inquire into the causes of the results. The notion that some injury to the patient is a necessary part of the curative process is parallel to a similar notion that has tacitly pervaded the old harsh and heroic practice of medicine. *It is utterly false.* A beneficent agency never does harm, except by the blind ignorance of those who apply it.

So far from downward passes being the only beneficial or magnetic ones, their *general tendency* is decidedly injurious when they carry the vital forces from the thorax to the abdomen — pre-eminently injurious when they carry the influence no lower than the hypochondria — relaxing, debilitating, depressing and nervous when they extend to the hypogastric region, where we find nervousness and melancholy, from which evil effects the magnetizer escapes only by continuing the passes down the limbs, producing physical vigor at the thighs and mental dullness or quietude upon the legs and feet. Onimus and Legros, in the practice of electro-therapeutics, acted upon a similar notion current among electricians, and in treating a case of chorea they passed the electric current from the hands to the feet, expecting to cure disease in the lower limbs by the descending current. They found to

their surprise, however, that the arms in four seances were cured by the ascending current they received. They continued the downward current from the spine for six seances without any benefit to the lower limbs, and then tried an ascending current to the spine, which completed the cure in two seances.

The result of the long passes is to diminish mentality and all the energetic impulses and emotions which sustain health, and to promote a state of purely animal life, subject, however, to the danger of producing very morbid, irritating, sickening and depressing influences, unless the impression be thoroughly removed from the abdomen to the limbs.

Upon the front of the body passes from the abdomen *up* the thorax are as beneficial as the reverse are injurious. Let any one who wishes to realize this try a number of individuals in succession with brisk and energetic passes, with a light friction on the clothing (or still lighter if on the skin), upward from the hypochondria to the shoulders or neck, or from the hypogastric region to the shoulders, either above or below the arms. It will be found invariably that these passes and frictions are refreshing, energizing and delightful. They disperse all morbid, debilitating conditions, rouse the pleasant emotions and promote calmness and health.

The passes down to the feet recommended by Deleuze are appropriate for reducing the activity of the brain, and are thus favorable to sleep.

Deleuze says, "it is proper in finishing to make several passes along the legs, from the knees to the end of the feet. These passes free the head." This is a correct observation, although the author had no conception of the reason involved. Dismissing the formula of passes, the application of the hands on the top of the feet is the best way of freeing the head — and the application on the front of the legs relieves both head and chest, as Sarcognomy explains.

"The descending passes are magnetic. The ascending movements are not," says Deleuze. This is incorrect — all passes are about equally efficient. The terminus of the pass determines its effect. Prolonged passes terminating at the hypochondria are quite

injurious. Any function of life may be developed by passes *towards* its locality, whether upward or downward. Somnolence may be promoted by passes to the epigastrium, whether downward, upward or lateral. The Sarcognomist makes passes from the function to be checked toward the function to be developed.

Deleuze commends magnetizing by the long pass from the head to the feet without touching, and also with gentle friction, as beneficial, which is true in many cases, but in general he prefers to keep the hand one or two inches from the body and sometimes at a distance of several feet.

This is not idle mummery. An influence may be exerted upon sensitives without contact, and moreover, passes without contact vividly excite the imagination and sensitiveness of the patient, and thus add to the effect. Neither are such passes inefficient with those in health. It is merely a question of impressibility and imagination.

The true effect of the magnetic seance is the cultivation of sensibility by a passive condition with the attention fixed upon the faint impression from the operator's hands — secondly, the surrender of soul and body to the influence of the active operator in close proximity as an auditor surrenders to the influence of the speaker; thirdly, the promotion of Somnolence by fixed attention to the operator and his monotonous passes. The latter result, however, may be more simply attained by fixed attention to any other object held near the eyes, an expedient sometimes employed in public exhibitions for selecting impressible subjects, or by a steady gaze into the patient's eyes. Moreover, Somnolence is strongly promoted by the nervauric emanations in proportion as they are recognized and felt by the subject. The whole process therefore is designed to produce indirectly what we produce directly when we stimulate the region in the temples or on the epigastrium; and the practicability of developing the latter by a Galvanic current renders such a process more intelligible and satisfactory to a scientific mind.

But Deleuze was purely empirical. He gives his directions, predicts the results and then says; "It is *useless* to search out the

causes of these facts; it is sufficient that experience has established them" and this is a leading reason why scientists have manifested an aversion to the subject of Animal Magnetism.

The term Animal Magnetism is perhaps allowable, though somewhat fanciful. Magnetism is an attractive force inherent in minerals. The human nervaura is not simply an attractive influence. It has every conceivable variety of influences — attractive, repulsive, wholesome, injurious, intellectual, stupid, elevating, debasing, exciting, calming — and Sarcognomy enables us to comprehend all these various influences and their local sources so as to evoke them when needed and to use them for good purposes.

The attractive influences which have some analogy to Magnetism belong to the upper portion of the back and to the upper portion of the occiput.

In his directions for the treatment of disease, Deleuze correctly states that pains are carried off by passes in the direction in which they are moved, but some of his advice is not quite judicious. He directs the application of the hand for several minutes upon the seat of pain or disease, followed by a descending pass toward the extremities. This may be well for the patient, but not for the operator. In placing his hands on the morbid part the operator is making an exchange of vital influences, and if sensitive himself he receives the entire morbid emanation in to his hands, and in a few such operations receives a very sensible injurious influence. We do not need to refer to very contagious diseases to understand this matter — all conditions, whether pathological or physiological, are contagious to the sensitive, and this perpetual contagion is the chief objection to the nervauric practice. Hence I have always warned my pupils with great emphasis to protect themselves — not to remain passively in contact with any form of disease, but to maintain as active a condition as possible — not to rest in contact with morbid parts, but first energetically remove the morbid condition and aura by dispersive passes, carrying it out of the body before applying the sanative influence of the healthy hand — not applying it then in a very passive manner, but holding the muscles firm and making as much active manipulation as possible.

Deleuze recommends another process which is beneficial, but instead of applying it at first, as he suggests, it should be applied after dispersive passes or frictions. He says, "place a piece of linen several times folded or a fragment of woollen or cotton cloth upon the suffering part, apply the mouth above it, and breathe through it." This method applies a very general and wholesome influence from the interior of the chest, and is not sufficiently appreciated.

Deleuze also mentions a case in which water was used for carrying off disease: M. N. filled a glass with water and covered it with a linen cloth to prevent spilling, then applied it to the back of the head of a patient, making passes from the head to the tumbler, giving decided relief. It is very true that water may carry off pathological influences, as all hydropathists know, and this is further illustrated in the electric bath.

Deleuze directs the patient whose eyes are closed to be roused by "passes transversely across the eyes." It is far more effective to stand behind the patient and make passes, either from the outer angle of the eyes or from the inner angles, backward and upward toward the region of Firmness and Energy.

Deleuze relates a case of hysteria with convulsions occurring in his practice, which alarmed and astonished him, but speedily passed off. If he had known the proper hypogastric treatment it would have been very easily controlled.

The instructions of Deleuze in reference to the use of magnetized water for healing need not be discussed farther than to say, that psychometry fully establishes the potential influence over sensitives of any and every emanation from a human being and the objects to which that emanation may be attached. He recommends the use of magnetized objects to apply upon the seat of pain, such as tissues of cotton or silk, and plates of glass, gold or steel. Modern magnetizers in the United States are using paper with success for sending out magnetic influences to patients. Of course the success of such means depends on a high degree of susceptibility in the patient and a very potent vitality in the operator.

In the magnetic *baquet*, composed of bottles of magnetized

water, communicating by wires with a central conductor as if they were Leyden jars charged with electricity, the good Deleuze passes from the sphere of tangible science into that of imagination — for imagination skilfully impressed would produce far greater results than his *baquet*.

In the developement of somniloquence, no matter by what process, or by the course of nature, there is a great exaltation of the interior or intuitive faculties, and Deleuze speaks very correctly of the phenomena of somniloquence or somnambulism. He says, "in the state of somnambulism the moral sensibility is undeniably much more lively." The cause of this is developed by Sarcognomy. "There is in most somnambulists a developement of sensibility of which we can have no conception. They are susceptible of receiving influence from everything that surrounds them, and principally from living beings. They are not only affected by physical emanations or the effluvia of living bodies, but also to a degree much more surprising by the thoughts and sentiments of those who surround them. If you are alone with a somnambulist and any one is permitted to enter, the somnambulist generally perceives it. Sometimes the person who enters is indifferent to him; at other times he feels for him either a sympathy or an antipathy." If the stranger is incredulous and suspects the sincerity of the somnambulist, or makes a jest of what he sees, the somnambulist is troubled and loses his lucidity. "If many witnesses surround and are occupied about him the fluid of each of them acts upon his organization."

This sensitive condition is merely an active state of the interior faculties, which exists normally in those who have a large developement of the lateral and interior regions of the front lobe and who by their psychometric perceptions are continually in rapport with those around them, or those at a distance to whom their minds are directed.

The developement of Intuition, the divinely intelligent element in man, under the name of Psychometry, will guide mankind hereafter into more profound science and philosophy than has ever before been conceived — carrying us into all the

mysteries of physiology, pneumatology, paleontology, astronomy, geology and antiquity. This interior faculty has been apparent in the somnambulism of magnetizers, but has not been guided and used for the results of which it is capable.

Deleuze describes the somnambulistic phenomena which sometimes appear as follows: "when the somnambulist has reached this degree of exaltation his manner of speaking is almost always different from that which he has in his ordinary state. His diction is pure and simple, elegant and precise; his manner, unimpatient; everything announces in him a state of tranquility, a distinct view of that of which he speaks, and an entire conviction of its reality. You perceive in his discourse not the least of what is called excitement or enthusiasm. In this new situation the mind is filled with religious ideas with which perhaps it was never before occupied. * * * This life appears to him only a journey, during which we ought to collect what is necessary for us in our everlasting mansions. * * * Sometimes the prodigious difference he perceives between his new manner of viewing objects and that which he had in his ordinary state, the new lights which shine for him, the new faculties with which he finds himself endowed, the immensity of the horizon which is spread before his eyes, persuade him that he is inspired."

In that mental condition supernal intelligences do communicate and influence the mind, or may even control the sensitive and make him their mouthpiece. When we know that these exalted powers may be cultivated by stimulating the organs behind the eyes and behind the root of the nose, with their corresponding locations at the lower end of the sternum and the epigastrium, we have added greatly to our power of seeking truth and wisdom, and advancing education. The boy, the girl, or the uneducated laborer may become, by the development of their interior faculties, teachers to those most advanced in education, as patients have often been enabled to instruct their physicians in diagnoses, prognoses and remedies.

Of marvellous phenomena Deleuze is but a modest narrator, without the slightest effort at investigation. He says "there exists

with some individuals a magnetic power, truly prodigious, of which I do not pretend to know the cause. "Many magnetizers induce somnambulism with very great facility and do not hope for success except from this crisis, while others can scarcely effect it, yet do not do the less good. Some of them act only by the will, without any apparent magnetic process."

The explanation of this, which will be given more fully in my Anthropology, is found in the occipital energy belonging to the region on the head just back of Combativeness, which gives this dominating, entraining power. The coronal region of the amiable sentiments, the whole upper surface of the head, is the source of the benevolent healing power which does not aim or desire to subjugate others. This benevolent power is nowhere so effective as at its origin in the brain, and the application of the upper surface of the head to the patient or to any painful or diseased part is the most soothing restorative treatment possible. It is remarkable that with all the vast amount of experience in Animal Magnetism nothing should have been known or suspected of this. The whole subject has been dominated by a spirit of blind routine, more monotonous than that of the medical profession. Deleuze himself says, "magnetism, if it has been practiced empirically from a high antiquity, has not, at least, formed a particular science, except for a small number of years. Magnetism cannot take its rank among the sciences, and present a doctrine of which application may in all cases be made, until physicians take it up seriously." But the hard, mechanical character which the medical profession has assumed utterly disqualifies it for investigating so profound, so delicate, so psychic a subject. It has not even been able to develop the rational principles of electric practice.

The remark that some magnetizers act by the will alone indicates that the region of will is largely developed — the region of Firmness, which is assisted by all the occipital organs — and that they have more of the psychic temperament derived from the interior regions of the brain, which brings them into rapport with persons at a distance, or into intimate sympathy with those who are near.

But little more need be said of Therapeutic Magnetism as presented by Deleuze. There is very little of it, beyond a limited formula, or rules of proceeding, which might be fully expressed in three or four pages, and which certainly has no claim to be considered a science or a scientific art. But the volume of his "Practical Instruction," reproduced in this country by T. C. Hartshorn, of Providence, R. I., is filled with gossipy details, good advice to magnetizers, descriptions of cases and their treatment, which certainly show success in the practice, and numerous illustrations of somnambulism and clairvoyance, mainly added by Mr. Hartshorn, with the testimony of physicians, making an aggregate of documentary evidence so weighty and convincing that it exhibits in a clear light the remarkable stolidity of medical colleges in continuing to treat facts so well established with silent scorn or open hostility, and at last endeavoring to reduce the whole subject to the coarse, mechanical proceeding which they call *massage* or rubbing.

I have shown that the somnambulic, clairvoyant and entranced conditions which constitute the mass of the phenomena of animal magnetism are the results of the predominance of certain faculties with which all mankind are endowed in various degrees, and which may be elicited by direct stimulation of their organs by the fingers or hand, and by Galvanic currents.

To produce the sleep or trance of insensibility the organ of Somnolence in the temples may be excited, or it may be produced by placing one hand at the epigastrium on the median line, just below the sternum, and the other on the back just behind the middle of the humerus, and below the shoulder-blade, which tends to a deep sleep. The insensibility to pain may be promoted by placing the hand upon the shoulder, from the acromion process (the external and upper surface of the shoulder) extending three or four inches inward.

Possibly these volumes may do something to overcome medical prejudice by showing the facility with which the neurological laws of the human constitution may be demonstrated by Galvanism. But scientific testimony seems to produce very little effect when it is

resisted by materialistic dogmatism. In addition to the testimony of a very large number of physicians as to the reality of the magnetic phenomena, the two most eminent of all French scientists, Cuvier and La Place, have given their attestation of the truth.

Cuvier says in his comparative anatomy, "the effects produced upon persons who *before* the operation (of mesmerizing) was begun were in a state of insensibility; those which have taken place upon other persons after the operation itself has reduced them to that state, and also to the effects produced upon brutes, *no longer permit it to be doubted* that the proximity of two animated bodies, in a certain position, and with the help of certain motions, do produce a *real effect, wholly independent of the imagination of either*. It is also evident that these effects are owing to a communication which takes place between the nervous systems of the two parties." The testimony of La Place in his great treatise on the calculation of probabilities is equally positive and explicit.

The eminent physiologist, Georget, said, "I have seen, positively seen, a great many times, somnambulists announce several hours, several days, twenty days beforehand, the hour, the minute even, of the attack of epileptic and hysterical fits, and of the menstrual eruptions, and indicate the duration and the intensity of the attacks — things which were actually verified."

The existence of these intuitive and prophetic powers in man I have demonstrated in developing the science of Psychometry, and pointed out their location, and in Sarcognomy I place the entire *modus operandi* in the possession of the public, of which for many years probably only the most enlightened will avail themselves.

Let us not forget that Dr. Elliotson, at the head of the medical profession in London, was driven into retirement for attempting to introduce in England the magnetic anaesthesia in surgical operations, after the committee of the Royal Academy of Medicine at Paris in 1836 had made the following statement of the success of Cloquet in operating during the somnambulic trance—a specimen of the large class of facts of which the present generation of physicians

have been carefully kept in ignorance by their professors — an ignorance which they are most faithfully transmitting to their successors.

The report made in 1831, signed by Bourdois de la Motte, president; Fouquier, Gueneau de Mussy, Guersent, Itard, J. J. Leroux, Marc, Thillaye and Husson says :

" You have all heard of a fact which at the time fixed the attention of the Chirurgical Section, and which was communicated to it at the session of April 16, 1829, by M. Jules Cloquet. The Committee thought it their duty to embody it in this report, as one of the least equivocal proofs of the power of the magnetic sleep. It relates to Madame Plantin, aged sixty-four years, living at 151 Rue Saint-Denis, who consulted M. Cloquet, on the 8th of April, 1829, about an ulcerated cancer on her right breast, which she had had many years, and which was complicated with a considerable enlargement of the axillary ganglions. M. Chapelain, the physician of this woman, whom he had magnetized for some months, with the intention, as he said, of reducing the enlargement of the breast, had been able to obtain no other result than a very profound sleep, during which her sensibility appeared annihilated, but the ideas preserved all their lucidity. He proposed to M. Cloquet that he should operate upon it while she was plunged into the magnetic sleep. M. Cloquet, considering the operation indispensable, consented to do it; and it was agreed that it should take place on the following Sunday, April 12. The two evenings previous, this woman was magnetized several times by M. Chapelain, who disposed her, when in somnambulism, to support the operation without fear, and even led her to speak of it with composure, while, as soon as she waked, she repelled the idea with horror.

" On the day appointed for the operation, M. Cloquet, on his arrival at half past ten o'clock in the morning, found the patient dressed, and seated in an arm-chair, in the position of a person peacefully wrapped in a natural sleep. It was nearly an hour since she had returned from mass, which she always attended at the same hour. M. Chapelain had put her into the magnetic

sleep since she came back. The patient spoke with great calmness of the operation she was about to undergo. Every arrangement having been made for the operation, she undressed herself, and sat down upon a chair.

"M. Chapelain held the right arm, the left arm being suffered to hang by her side. M. Pailloux, a student of the Saint-Louis Hospital, was charged to hand the instruments and to make the ligatures. First an incision was made from the armpit, above the tumor, to the inner side of the breast. The second, commencing at the same point, separated the tumor below, and passed round to meet the first. M. Cloquet dissected the enlarged ganglions with caution, on account of their proximity to the axillary artery, and took off the tumor. The time consumed in the operation was ten or twelve minutes.

"During all this time, the patient continued to converse tranquilly with the operator, and did not exhibit the slightest sign of sensibility; no movement of the limbs or *of the features*, no change *in the respiration, nor in the voice*, no emotion, not even *in the pulse*, were manifested; the patient did not cease to be in the state of self-forgetfulness and passive insensibility, in which she was several minutes before the operation. They were not obliged to hold her; they merely sustained her. A ligature was applied to the lateral thoracic artery, which was exposed during the extraction of the ganglions. The wound was closed with sticking plaster, and dressed; the patient was put on the bed, still in the state of somnambulism, and left there forty-eight hours. An hour after the operation, a slight hemorrhage ensued, which did not continue. The first dressing was removed on the succeeding Tuesday, April 14. The wound was cleansed and dressed anew: the patient manifested no sensibility nor pain. The pulse preserved its natural beat.

"After the dressing had been put on, M. Chapelain awoke the patient, whose somnambulic sleep had lasted ever since one hour before the operation, that is to say, for two days. This woman did not appear to have any idea or any impression of what had passed; but, on learning that she had been operated upon, and

seeing her children around her, she experienced a very lively emotion, which the magnetizer terminated by putting her asleep immediately."

The report of the commission fully confirmed the claims of the friends of Animal Magnetism, giving some interesting illustrations of clairvoyance and the power of somnambulists to prescribe successfully for the sick. Two centuries previously, in France, during the time of Richelieu, Grandier was condemned and burned alive for the exercise of the powers which this commission commended as a matter of science. Unfortunately the medical profession during the last half century has been retrograding in this matter toward seventeenth century ignorance.

Notwithstanding the vast number of public and private exhibitions of the power of clairvoyance, a brutal hostility to this faculty has been exhibited by many of the leaders of the medical profession, and I think it well to republish here one of the best illustrations of this power.

Rev. E. B. Hall, of Providence, (Dec. 1, 1837) stated in reference to Miss Brackett "I have seen a sealed letter containing a passage enclosed in lead, which letter she held at the side of her head not more than a moment, all in sight, then gave it back to the writer, and afterward wrote what she had read in it. The letter was opened in my presence, and the two writings agreed in every word, there being two differences in spelling only."

In another instance M. S. Covill of Troy, being skeptical, wrote a sentence on paper without any one's knowledge, enclosed it between two thick cards, folded the whole up in deep blue paper, sealed it with his own seal and a number of wafers, and put it all into a larger sheet directed to Mr. Isaac Thorpe; this sealed letter as he received it was presented by Mr. Thorpe to Miss Brackett in the presence of quite a number of gentlemen, requesting her to read it without breaking the seals. She took the letter with her on retiring for the night and in the morning dictated the following as its contents, which was written down by Mr. H. Hopkins:—

"No other than the eye of Omnipotence can read this in this envelopement. * * * * 1837."

The stars represented a portion she could not read. The letter was returned with the seals undisturbed, and her reading was published before the answer was received. Mr. Scoville stated that the reading was, "No other than the eye of Omnipotence can read this sentence in this envelope. Troy, New York, August, 1837." Thus the reading was correct in everything but the local date and the word "sentence," which was omitted.

These marvelous powers of the soul and brain, which the cultivators of Animal Magnetism have demonstrated so many thousand times without overcoming that hostility which springs from the coarser elements of human nature, are now clearly intelligible, since I have traced them to their location in the front lobe of the brain, and shown how they may be evoked.

The vast number of illustrations of clairvoyance and of the power of the disembodied soul during the last thirty years, and the vast number of cures effected by human vitality without medicine and without learning would have wrought an entire revolution in philosophy and therapeutics, if the educated classes had been taught to reason.

The great need of the age is a true education, which will enable all classes to welcome and appreciate new truth.

The progress of the higher departments of science and philosophy is not like the steady growth of physical science, but is rather a matter of accidental impulse, local fashion, and prejudice. The systematic cultivation of animal magnetism has been neglected. The study of the brain by comparative developement has been almost forgotten, although it vastly exceeds in interest and value all other methods in natural history and ethnology.

My own experimental investigation, which organizes a positive and complete Anthropology, has not been sufficiently urged to enforce its proper consideration. The marvelous facts of spiritualism, and the diagnostic and healing powers which it has developed are now the chief objects of interest with progressive minds, and our therapeutic science is about to be enriched by the partisans of psychic methods, who discard all physical means, as the medical

profession has discarded the psychic. Every step in that direction is an advance toward higher conditions. The marvelous cures, so numerous and well attested, achieved by prayer, faith, spirit agency and what has been called "mind cure," far transcend the achievements of medical therapeutics, and the question is being determined by experience, to what extent these psychic agencies can be substituted for the physical means upon which the world has heretofore relied.

The partisans of physical science have confined themselves rigorously to physical methods, forgetting that man is an eternal spiritual being, even while dwelling in a material form. If the partisans of psychic science, ignoring physical means, treat the soul alone, we may obtain comparative statistics of the two methods, and the true philosopher, comprehending each, will avail himself of both.

CHAPTER XIV.

SYNOPSIS OF PRACTICAL RULES.

I now present, in very concise statement, the rules to be observed in nervauric and electric therapeutics, by showing what localities are to be stimulated or repressed for various purposes. The organs mentioned will be found on the charts of the head and body. The reader will understand that stimulation is effected by the application of the hands, by gentle percussion, by the negative pole of a Galvanic current, by a Faradic current confined to the spot applied for a very short time, by stimulating plasters or embrocations, by heat and in some cases by friction.

Repression is effected by dispersive passes, by the positive pole, by cold steadily applied for a long time, by hot water briefly applied, by evaporating liquids and by medical sedatives.

The localities referred to and the directions will serve to guide all external treatment, by clothing, by plasters, by baths and by the pneumatic or vacuum treatment. Warm clothing applied on any part of the body develops the local influence according to Sarcognomy, and variations of the clothing produce important effects.

1. *To establish health.* Stimulate Health, repress Disease on the body and the head. Disperse excitement from morbid organs, and reinforce them by the hands. Rouse all inactive functions and repress those in excess.

2. *To promote mental soundness.* Stimulate Sanity and Cheerfulness, and the entire summit of the trunk — the shoulders

and upper surface of the chest. Repress Insanity, Melancholy, Disease, Irritability and Excitability.

3. *To promote mental vigor.* Stimulate the Cephalic zone of head and body. For the psychometric clairvoyant and spiritual faculties, stimulate at the lower end of the sternum — for Oratory at the five upper dorsal vertebræ and the posterior surface of the shoulder joints. On the head, Oratory is on the upper occiput — Clairvoyance at the root of the nose, Psychometry in the sensitive region of the temples and the Intuitive region at the front lobe, which is behind the root of the nose.

4. *To produce sleep.* Stimulate three inches below the sternum, or on the cerebral organ of Somnolence — then on the organ of sleep on the body and head, assisting if necessary by the front of the leg and foot.

5. *To promote wakefulness.* Stimulate the middle of the forehead — disperse upwards from the temples. Stimulate upper occiput, shoulders and thighs — disperse from the whole front of the abdomen, inguinal and pubic regions, and from the region under the jaw.

6. *To relieve headache.* Brush rapidly downward along the jugular veins and the back of the neck; brush upward and backward from the temples, and backward on the median line. Make dispersive passes at the seat of the pain. If the head is cool stimulate the cephalic zone — if hot, the front of the leg and top of the foot.

7. *To invigorate the lower limbs.* Stimulate occipital base of brain and neck, lumbar and sacral regions of back, entire thighs and calves of legs.

8. *To overcome pneumonia* and other conditions in which there is hyperæmia, warmth, irritation or congestion in the chest. Stimulate pulmonic portion of dorsal region (between the shoulders) and tibial surface of the leg (aquatic region) including top of foot. Use dispersive passes from front of chest toward feet and hands. For prompt effects use hemastasis, by applying ligatures around the shoulders and thighs, which will be more effective if

the legs and forearms are inserted in warm water or stimulated with mustard. Keep the limbs distended with blood several hours.

9. *To overcome asthmatic*, or dry and constricted conditions of the lungs — stimulate inspiration on the chest and the pulmonic region on the back.

10. *To overcome excitability* of the heart. Stimulate the entire shoulder and the middle of the dorsal region, also Firmness and the upper occipital region of the head, dispersing from the temples.

11. *To deepen respiration*. Stimulate on the abdomen below the umbilicus, and on the face below the mouth. For expansion of the chest by costal respiration — stimulate Inspiration on the ribs, and the thoracic or pulmonic region in the temples. Stimulate Health to co-operate.

12. *To promote the healthy action of the stomach*. Stimulate the lower dorsal region and the gastric location just below the ribs (Alimentiveness) in connection with Health.

13. *To rouse the diaphragm*. Stimulate on the side and the spine, along the course of the seventh and eighth ribs, and on the region of Respiration below the umbilicus.

14. *To overcome constipation*. Stimulate the region of Defecation on the abdomen (lower end of Gastro-enteric region) and the entire lumbar region; or pass mild Faradic currents between these two locations, or alternating Galvanic currents.

15. To overcome menorrhagia and dysmenorrhœa. Make rapid dispersive passes from the groin upward and backward; stimulate the lumbo-sacral junction, and the location of Cheerfulness, Sanity and Chastity near the axilla, with the hand or the negative pole, the positive being on the groin.

16. To overcome Insanity, in any of its forms of mania, dementia, etc., the pelvic organs should be restored to health and all serious affections in the region of the liver and stomach relieved; then Galvanic currents for ten, twenty or in some cases even thirty minutes, should be passed from the perineum to the region of Sanity at the axillæ, on each side — also to Health and the cephalic or upper dorsal region. Very gentle Galvanic

currents may also be passed from the under-jaw region of Insanity to the cerebral locations of Sanity and Firmness, or the latter may be stimulated by the hand, and the former subdued by dispersive passes on the side and back of the neck. When there is violent excitement and over-active circulation in the head, a stream of hot water applied to the disturbing regions on the side and back of the neck, along the carotid and vertebral arteries, will have a beneficial influence.

17. *To relieve hysteria.* Use dispersive passes or Galvanic currents, from the location of the womb to the region of Sanity at the axilla and stimulate the region of Health at the top of the shoulder.

18. *To treat organic diseases of the womb.* Remove excitability as in hysteria; use suitable medical injections, such as Helonias, Hydrastis, White Pond Lily (*Nymphaea odorata*) and Bromide of Ammonium, and apply the positive pole to the cervix, sending a current to the lumbar region or to the axilla.

19. *To control nausea.* Nauseating substances sometimes require to be removed by an emetic or by a gentle, soothing cathartic. Medicinally, nausea has been resisted by soothing aromatics such as peppermint water and minute fractions of a grain of morphine, or by ingluvin and lactopeptin, which assist digestion, or by minute portions of lobelia or ipecac, which act homœopathically. To treat nausea and vomiting according to Sarcognomy, relief should be given by dispersion from the seats of Nausea and Disease on the body. In slight cases vigorous dispersive upward passes from Disease, and stimulation of Health and the lower dorsal region will restore the stomach to a comfortable condition. In such cases a Galvanic current from Disease to Health is beneficial, and relief has sometimes been given by a Galvanic current at the locality of the stomach from left to right, aided by the application of atropia or of belladonna on the surface. Dr. LeConiat claims to have relieved seasickness by applying the negative pole near the pyloric end of the stomach, and passing the positive over the surface from the cardiac to the pyloric end after moistening the skin with a solution of sulphate of atropia, the

active element of belladonna. But this treatment is rather palliative than radical. The radical treatment must reach the sacroiliac region of Nausea or Disgust, though it may be assisted by hypochondriac and epigastric treatment. Thorough dispersive treatment should be applied at Nausea, and the Galvanic current introduced at that location and conducted to the shoulder where the negative pole may be applied on the top, back and front of that region over the entire space between the lower angle of the scapula and the nipple. With the highly sensitive, the nervauric manipulation would be equally effective — stimulating the upper region just mentioned, and dispersing from the lower. The horizontal position of the body favors the predominance of the upper region, and it would even be advantageous if the head of the couch were a little lower than the foot, and if the shoulders and arms were kept especially warm.

20. *Phthisis pulmonalis*, or tuberculous consumption, when not too far advanced, may be controlled and cured in the very impressible with very little use of medicine; but in all others medical treatment must be the chief reliance. The fundamental rules of all treatment are to diminish the irritation of the lungs, promote a healthy expectoration, increase the muscular energy, increase the digestive and assimilative power, and develope the largest possible amount of healthy red blood. Hence, in the early stages an active, hardy, out-door life, developing a vigorous appetite and satisfying it with rich nitrogenous food (especially flesh) has often wrought a perfect cure.

In the nervauric treatment, the irritation of the lungs must be relieved by dispersive passes to the hands and feet, and by stimulating the aquatic or tibial region, which overcomes pulmonary irritation. The lower dorsal region should be stimulated to promote digestion: the shoulders or Health region, and the space between them, to invigorate the lungs — Vital Force and Nutrition to resist debility and emaciation, and the upper and lower limbs should be stimulated to assist them in active daily exercise. An active life in the open air and sunshine and the most generous sustaining diet that can be digested are necessary.

21. *Pericarditis*, and other inflammations of the heart require the tranquillizing and tonic influence of Firmness, Patience, Fortitude and Heroism, located at and near the sagittal suture or median line of the head, and on the body at the top of the shoulder. The most exterior part of the shoulder gives Heroism or Hardihood and interiorly at the base of the neck we find Patience and serenity which overcomes all excitability and irritation. We get additional vigor for the heart as we descend on the shoulder blade and also on the spinal column, between the shoulders. In addition to these quiet tonic influences, by which we produce a slower and steadier pulse, we need the antiphlogistic influence of the tibial or aquatic region, which is the proper reliance for resisting inflammatory diseases. Under these two influences the inflammation, pain, excitement and oppression are relieved, and nature displays its restorative power. As there is usually considerable heat or fever, this would require in addition to the aquatic influence that of COLDNESS, on the side of the body and on the head, which directly resists the fever.

We should not forget that the first thing to be done in this, as in other active local affections, is to disperse the local morbid influence. Dispersive passes upward and backward over the heart toward the shoulder and spine should be our first ministration and should be repeated as often as the symptoms indicate the need.

22. *Dilation* of the heart — a condition of debility, recognized by the feeble circulation, oppression at the heart, weakness of its impulse and the increased extent of its sound in the chest requires perseverance in a tonic treatment through the shoulders, the upper dorsal region and the thighs to produce the same results attained in the medical treatment by the use of Cereus, Convallaria and Digitalis which are necessary in such cases. The Cereus Grandiflora or Bonplandii and the Convallaria I should consider indispensable, but they do not supercede the necessity of nervauric treatment for the impressible.

23. *Affections of the liver* should be treated adjacent to its location, bearing in mind that we impart energy through the pos-

terior surfaces. Hence when we apply the hand on the lower dorsal vertebræ we energize the liver. Passing forward on the side of the trunk, the influence becomes more exciting and less tonic. In its congested and irritated conditions, dispersive passes from the front to the back are appropriate, together with the stimulation of the lower dorsal region and the shoulders. In inflammatory conditions, the region of coolness and the tibial region have a good influence. We stimulate the liver on the hepatic zone of the brain, producing the most energetic effect about two inches behind the cavity of the ear.

24. *Affections of the stomach* are treated at the lower dorsal vertebræ and at the gastric location on the abdomen below the ribs — also on the assimilative region above the umbilicus — the shoulders being used to control the excitement and give it a healthy direction.

25. *All irritations of the abdominal organs* are treated with dispersive passes backwards and upwards — the lower dorsal and lumbar regions being used to vitalize, and the shoulders to control, regulate and moderate the action.

26. *Fevers* require efficient dispersion from the hypochondriac and hypogastric regions (Disease and Calorification) and the stimulation of Health and Coolness — and of the tibial region when the brain and nervous system are excited.

27. *Chills* require the excitement of Calorification, Health, the lumbar region and the thighs.

28. *Inflammations* or inflammatory diseases require the influence of Coolness, the tibial region and the top of the shoulder. The first counteracts inflammatory heat and fever, the second diminishes capacity for inflammation, and the third diminishes sensitive excitability and sustains the vital energy.

29. *Paralytic* affections (if the brain is not involved) require treatment through the spine — dispersive passes, followed by the vitalizing application of the hand — or Galvanic currents in alternating directions through the spinal region affected, for about ten minutes. Descending currents are commonly used from

a point above the affected portion through the cord to the muscles. Brief ascending currents add to the effect. Faradic currents may be applied directly to the muscles concerned.

When the brain is involved, dispersive downward manipulations may be used over the affected part and very gentle Galvanic currents may be passed downward a week or two after the attack.

30. *Local* affections require local treatment but may all be greatly aided by constitutional treatment according to Sarcognomy, to increase the vital power and modify the local condition.

31. *Kidney* diseases require local treatment, their spinal control being just above the kidneys. The antagonistic functions which produce their quiescence being located around the shoulder and especially at its superior anterior aspect.

32. *Antagonism.* Antagonistic organs oppose each other, each tending in high excitement to suspend or suppress the action of the other, as courage suppresses fear, and benevolence suppresses selfishness. Hence we diminish the excitability and activity of any organ by exciting its antagonist. But this antagonism exists in various degrees. There is the direct and absolute antagonism which tends to suppress the function entirely. There is also the antagonism to excitability, which has a quieting effect but does not suppress the functional power. There are many other modifying influences, the exposition of which would require a full developement of Anthropology. As we do not seek the suppression of functions, the antagonism to excitability is what we may find useful. The *absolute* antagonism to the bodily functions belongs to the superior anterior regions of the brain, which tend to develope the spiritual at the expense of the corporeal.

The antagonism to excitability of the heart is on the upper aspect of the shoulder adjacent to the neck. The antagonism to excitability of the lungs occupies the arms from the shoulder to the elbow. The more sedative antagonism to excitability of brain and lungs occupies the foot and the tibial surface of the leg. The antagonism to gastric and hepatic excitability is on the shoulder

midway between the neck and the acromion prominence, extending backward on the upper part of the scapula. The excitability of the alimentary canal is antagonized from the top of the shoulder back and downwards to a little below the axilla. Uterine and sexual excitability are antagonized on the side of the chest below the axilla (marked Ch.) Locomotive or restless excitability is antagonized on the side of the chest at the anterior line of the arm.

DESCRIPTION OF THE STATUESQUE CHART OF PSYCHO-PHYSIOLOGICAL SARCOGNOMY.

The "functional" division of the head (front view) shows the functional influence of the different regions. The "correspondential" division (rear view) shows the regions of the head which correspond with the regions of the body.

The subdivisions of the spinal column, cervical, dorsal, lumbar and sacral are plainly marked on the rear view. The upper or thoracic portion of the figure has been excessively developed by the artist, at the expense of the lumbar and sacral regions. The controlling powers of the spinal column, cephalic, thoracic, abdominal, pelvic and crural are plainly indicated, which are described in the chapter on the spinal region.

The upper half of the dorsal region is marked Thoracic and the lower half Abdominal, as the one governs the Thoracic muscles and viscera, and the other the Abdominal. The Thoracic region has not been marked Pulmonic and Cardiac, but its upper portion has chiefly the calm Pulmonic character and the lower portion manifests the Cardiac energy and the vital force of deeper respiration, running into diaphragmatic action at the Phrenic zone, where the Thoracic and Abdominal come together. The functions

of the lumbar and sacral regions and the lumbo-sacral function are fully described in Chapter IX.

The shoulders and arms, corresponding to the Brachial region of the brain, present Firmness, Fortitude, Energy, Heroism or Hardihood, and running down to the elbow, we have, posteriorly, Dignity (or Self-esteem and Self-respect), Self-confidence and Love of Power assuming an arrogant character at the elbow. On the opposite anterior surface (the biceps flexor) we have Ambition of every grade, from the highest to the lowest, and on the exterior surface the impulse called Ostentation, which is one of the leading and most costly characteristics of civilized society. The interior surface of the arm facing the body corresponds to affections and attachments which are more forcibly expressed on the inner surface of the forearm.

The inner surface of the forearm and palm of the hand have the adhesive and attractive character which is sometimes called magnetic. The influence is gently tonic, vitalizing and somewhat soporific. The external surface of the forearm and hand is hostile and combative or repellent. The left arm of the figure is ignored, to mark the locations on the body which it would conceal — Cheerfulness at the junction of the arm and trunk — Sanity just below it, running down into Cautiousness and Excitability, behind which is Coldness, the antagonist of fever and of undue excitability. In the ordinary position of the arm Coldness would be parallel to its posterior line. Sleep, between Coldness and Adhesiveness, is the centre of conservative physiological influences.

Adhesiveness is a tonic sustaining influence, less violent and impulsive than the organs below, less firm and sustaining than the organs above.

Approbateness, above Adhesiveness, has a more cheerful, pleasing and healthful influence — more of social ambition and self-reliance, approximating closely to health. At the lower angle of the scapula, in the Approbative region, is the organ of Playfulness (marked Play.) the source of gayety, humor and lively sport which cooperates well with cheerfulness. As the antagonist of

thought, it dissipates the effects of study and prolonged meditation.

The dorsal region of the spinal column has been fully explained as the source of the energies of the thoracic and abdominal muscles and viscera. Its psychic influences necessarily relate to the actions in which the thorax and entire trunk are concerned — which of course are numerous and energetic. The name which best expresses the power of the lower portion is Business Energy — while the upper portion, which uses less muscular and more moral and vocal power, may be properly called Oratory, or the faculty by which we impress our fellow beings.

At the lumbo-sacral junction we find the centre of sexual energy, and in the lumbar region the sources of the energies exercised by the combative and hostile passions.

The animal forces and passions acquire their maximum energy at the posterior base of the trunk, where Hatred or Domination, Desperation and Destructive Violence are found, corresponding to the base of the brain. This is all a region of animal force, which attains its maximum at the summit of the thigh where Hatred passes into Turbulence (Vital Force). The influence of this region when highly excited is gloomy and unpleasant. An especially unpleasant influence is found at the sacro-iliac symphysis, that is, about two inches on each side of the lumbo-sacral junction — the region of disgust or Nausea which repels the offensive objects from the stomach and bowels, as the other portion of this region repel external objects. In this we find the explanation of sea-sickness and of nausea and vomiting from other causes. The cerebral correspondence is on the posterior portion of the cerebellum, which explains the frequent occurrence of vomiting in diseases of the cerebellum.

The entire basis of the pelvis from the coccyx to the pubes is the seat of the forms of excitability which in predominance destroy the integrity of the brain and nervous system by Insanity, Idiocy and Paralysis. The same remark is applicable in a minor degree to the right and left groin and the hypogastric space between them, which is the seat of hysteria. In the midst of this anti-cephalic region we locate Insanity, at the perineum.

The word Vivacity, on the hips, (the developement of which is shown by the breadth of the hips) expresses a quality more conspicuous in the female than the male. It corresponds in a lower grade with Playfulness on the scapula, but has a more hysterical impulsiveness.

The entire developement of the lower limbs is singularly parallel on a lower plane with that of the upper. The energies of the thigh resemble those of the arm, and the leg the forearm.

Vital Force at the summit of the thigh, and Nutrition just exterior to it are essential to life and growth. We find them deficient in the emaciated and consumptive. The antagonistic region to Vital Force is on the chest, above the mammae. The antagonism to Nutrition is farther back, at the upper end of Inspiration. The antagonism to the muscular impulses of the thigh is at the anterior part of Sanity called Tranquillity. The muscular impulse assumes a restless character at the knee.

The anterior surface of the leg, exterior to the edge of the tibia (marked Aquatic), is the seat of the lower condition of life, first realized in the embryonic condition, which corresponds to cold-blooded or aquatic animals—a condition which limits the action of the brain and lungs produces a sedative, cooling, soporific impression, and overcomes all inflammatory tendencies.

The region marked Aerial corresponds to a higher grade of life which we find in birds, characterized by greater activity and warmth. The region marked mammalian corresponds to a fuller developement of animal life, approaching more nearly the human—hence the calf of the leg gives important aid in reinforcing animal life, especially when reduced by mental labor.

The Vegetative region, corresponding to the upper surface of the foot, is valuable in therapeutics for subduing all excitement of the nervous system and lungs, and promoting sleep. It has the cooling influence of the Aquatic region.

The Mineral region, or bottom of the foot, is extremely sedative, producing dullness and heaviness, and may be used for the promotion of sleep and as a general sedative.

On the front of the trunk we observe at the summit of the

Moral region Benevolence, Religion, Patience (B. R. Pat.), below which are the Moral region and the Intellectual. The exterior part of the Moral region, anterior to Firmness and Energy contains the loving emotions, merging into the friendly, adjacent to the Intellectual. The word Love at the mammæ fully expresses the character of that locality. Adjacent to Patience and Energy the moral sentiment assumes the character of Conscientiousness or Duty.

At the lower end of the Intellectual region (the end of the sternum), we find Somnolence, the region of Dreaming or Intellectual sleep, similar to that produced by mesmeric proceedings. Between Somnolence and Love is the region of Spirituality which gives the perception of spiritual beings. At the junction of Somnolence and Sensibility is the maximum of impressibility, and by impressing this region we increase our control of the subject. The region of Sensibility just below, includes both psychic and physical sensibility, and increases the sensibility to all impressions. At the margin of the ribs or hypochondria this sensitiveness to injurious impressions attains its maximum, and we mark this locality as Disease, because it gives a liability and tendency to morbid action.

Posterior to the mammæ and parallel to the anterior line of the arm is the organ of Inspiration, the correspondent of which is in the temples. Physically it causes a determination to the lungs, and promotes expansion of the ribs. Its psychic effect is mental or spiritual inspiration — a condition of emotional and mental activity.

Behind Inspiration, Cautiousness would be covered by the usual attitude of the arm. It descends into Excitability, the source of excitement and fear, behind which, on the side, is the region of Irritability (Irritab), the influence of which is unpleasant when strongly excited — a fact which some have discovered in electrical practice.

Just below the margin of the ribs is the organ of Alimentiveness, adjacent to the lower aspect of the stomach. The Gastro-enteric region (acting on the alimentary canal) extends

from Alimentiveness obliquely down to a point midway between the umbilicus and the middle of the groin, which may be regarded as the special region of defecation.

Posterior to the Gastro-enteric region we find on the side between the ribs and hips the region of Selfishness, which in its full influence becomes Baseness or selfish disregard of moral obligations. Its moderate influence serves chiefly to promote the abdominal functions.

Below this and anterior to the margin of the ilium or hip bone, but above the groin, is the region of Melancholy — the normal influence of which is to dispose us to look out for evils and dangers and indulge in unfavorable views of all things, resulting in Melancholy, unless this is controlled by the influence of Cheerfulness, which gives favorable views of life and disposes us to expect and demand the good will of others.

Below the umbilicus, half way to the mons veneris or pubic bones, is the organ of Calorification, which is in close relation with the small intestine called the ileum, and which is the corporeal region for the evolution of heat, corresponding with the anterior surface of the medulla oblongata, externally reached through the chin, on which we mark the cerebral seat of Calorification. The temperature of the body and its febrile conditions are regulated by Calorification and Coldness.

Below Calorification is the Uterine region controlling the excitability of the womb and producing the liability to hysteria. In the male sex, a similar excitability exists at this location, and sometimes even hysteria has been exhibited. Below this come the sexual organs, immediately above which, at the mons veneris (or junction of the pubic bones) is the region of Lethargy (corresponding to the bladder) which has a dull soporific influence. - The location in the head is just above the larynx. The sexual organs correspond in cerebral location with the larynx, which explains their power over the voice and the developement of the larynx.

The sexual regions below Calorification are antagonized at the space between Coldness and Sanity, marked Ch. or Chastity, the predominance of which over sexual impulses is highly impor-

tant to the integrity of the nervous system. Sexual excess is the surest of all methods of degrading and injuring the brain.

Above Calorification we have around the umbilicus (corresponding with the cerebral location around the nose and mouth) the region of Respiration. By stimulating this below the umbilicus we deepen respiration.

Above the umbilicus, extending toward Somnolence, is the region of Assimilative absorption, corresponding with the mesenteric action, which supplies the thoracic duct. Its influence is soothing and restorative; as we ascend it becomes drowsy or somnolent, and at the organ of Somnolence merges in the intuitive and psychometric powers which belong to its upper portion, adjacent to the intellectual.

DESCRIPTION OF THE PSYCHOLOGICAL CHART OF THE BRAIN.

In this chart we have a general view of the functions of the cerebral organs — not a complete analysis, for that would require a hundred and fifty or two hundred subdivisions, but enough to give a practical understanding for therapeutic purposes.

As these organs manifest all the opposite tendencies of human nature, they constitute a complete system of antagonism, and the character or constitution is determined by the proportions of the antagonizing organs, which may be enumerated as follows.

It is not possible, however, to elucidate the antagonisms of all the organs by mere lists of names. It would require numerous subdivisions and definitions, for there are very few words which correspond closely to any cerebral function. The fact that the cerebral functions are both psychic and physiological forbids their complete expression by any word. In the volume of Anthropol-

ogy the exact antagonism of organs will be made clear by full descriptions of these functions.

| | |
|---|--|
| Health, | Disease. |
| Firmness and Fortitude, | Excitability and Alimentiveness. |
| Heroism and Hardihood, | Sensibility. |
| Energy, | Relaxation and Gastro-enteric |
| Cheerfulness, | Melancholy. [region. |
| Sanity, | Insanity. |
| Integrity or Conscientiousness, | Selfishness. |
| Region of Loving Emotions, | Region of Violent Passions. |
| Region of Friendly Emotions, | Region of Combative Impulses. |
| Region of Combining and Creative Faculties, | Business Energy and Ambition. |
| Intellectual Region, | Adhesiveness, lower part of Approbativeness and upper part of Combativeness. |
| Modesty, | Ostentation. |
| Reverence, | Dignity, Self Confidence, Love of Power. |
| Sublimity, | Animality. |
| Cautiousness and Tranquility, | Turbulence and Muscularity. |
| Coldness, | Calorification. |
| Consciousness, | Sleep. |

The region of Insanity presents violent impulses in the posterior part, idiotic and childish in front, and forms of monomania between.

The region of Loving Emotions comprises Religion, Philanthropy or Kindness, Hope and Love — also the tendency to trance and suspension of physiological life. The normal action of this region sustains the brain and the spiritual life — the abnormal or excessive action suppresses physiological processes, developing the spirit at the expense of the body, as its antagonist at the base of the brain in abnormal action stimulates the body at the expense of the spirit, thus producing moral and physical injury, but in its normal action animates and impels all vital processes.

The Friendly Emotions comprise Benevolence, Devotedness, Faith, Liberality, Sincerity, Sympathy, Friendship, Politeness, Imitation, Humor, Admiration. Their influence is soothing, brightening and somewhat intellectual.

The antagonistic region of Combative Impulses is stern, selfish, narrow minded and energetic. It embraces Avarice, Jealousy, Rivalry, Secretiveness, Aggressiveness, Stubbornness, Censoriousness, Dogmatism, Etc. These are the effects of overaction. Moderately stimulated it is an important tonic to the mental constitution, giving power to overcome difficulties.

The Intellectual region comprises : — *Understanding*, consisting of Foresight, Sagacity, Judgement, Wit, Reason Ingenuity ; *Recollection*, consisting of Memory, Time and System ; *Perception*, consisting of Form, Size, Distance, Weight, Color, Order, Light and Shade. The influence of this region is intellectually bright, but physically negative and exhausting, as we see in intellectual labors. Its antagonism appears on the map in Adhesiveness, with the lower portion of Approbativeness and upper portion of Combativeness. Taking this as the Adhesive region, for Adhesiveness is its leading character, its influence is social, animating, invigorating, tonic and retentive — the opposite of the intellectual.

The sense of vision is exercised by the perceptive organs mentioned, which lie on the supra-orbital plate (which constitutes the vault of the eye sockets). The centre of vision is the sense of Light, which is located between Color and Shade. The latter, at the inner angle of the eye, adapts it to a dim light and connects with the intuitive or clairvoyant region behind the root of the nose. The sense of hearing is at the junction of Sensibility and Language — a location which has been recently demonstrated by vivisection.

The organ of Consciousness is the centre of the intellectual group, imparting its vividness to perception, recollection and understanding, and connecting with the interior intuition.

Magnanimity (Mag.), at the junction of Sanity and Approbativeness, indicates the seat of a faculty analogous to self-respect, as

Sanity is analogous to Firmness. The region of Approbativeness has several subdivisions not necessary to mention for therapeutic purposes. Its impulse is to teach, to lead, to persuade and to please.

The combining and creative region contains Ideality, Imagination, Scheming, Invention, Composition, Calculation, Tune, Language, Somnolence. Its antagonistic region of Business Energy and Ambition prompts to action instead of meditation. Yet by one of the most important laws of Anthropology, these antagonistic regions co-operate in action. The passive influence of the frontal region is seen at its maximum under the influence of Somnolence on the head or the body. The active influence of the occipital region is seen when it is excited on the arms or on the head. Passes from the sternum and epigastrium to the shoulder are rousing — in the opposite direction, soothing.

DESCRIPTION OF THE ANATOMICAL PLATE.

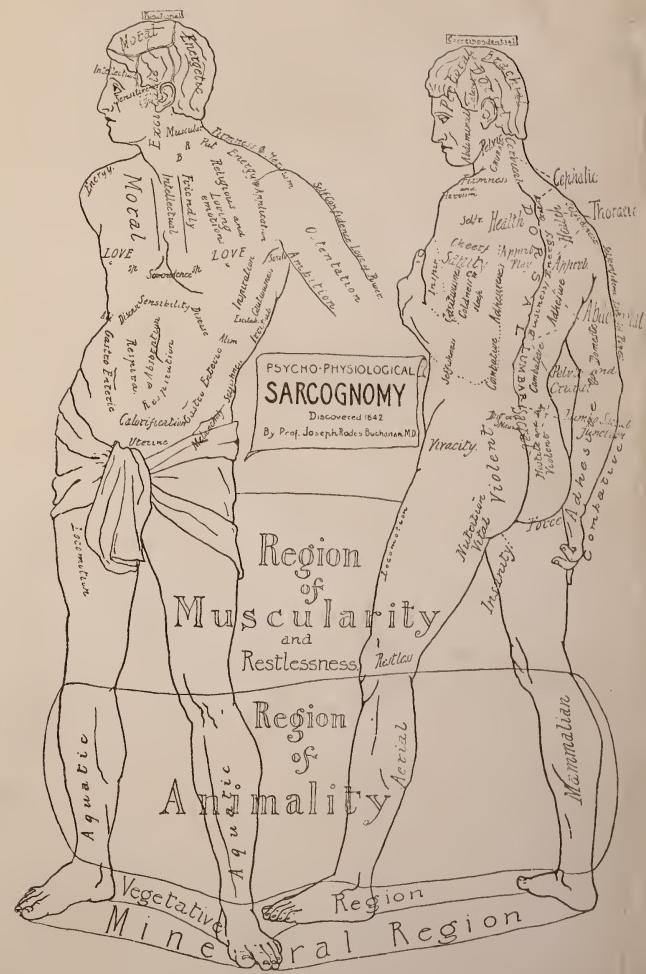
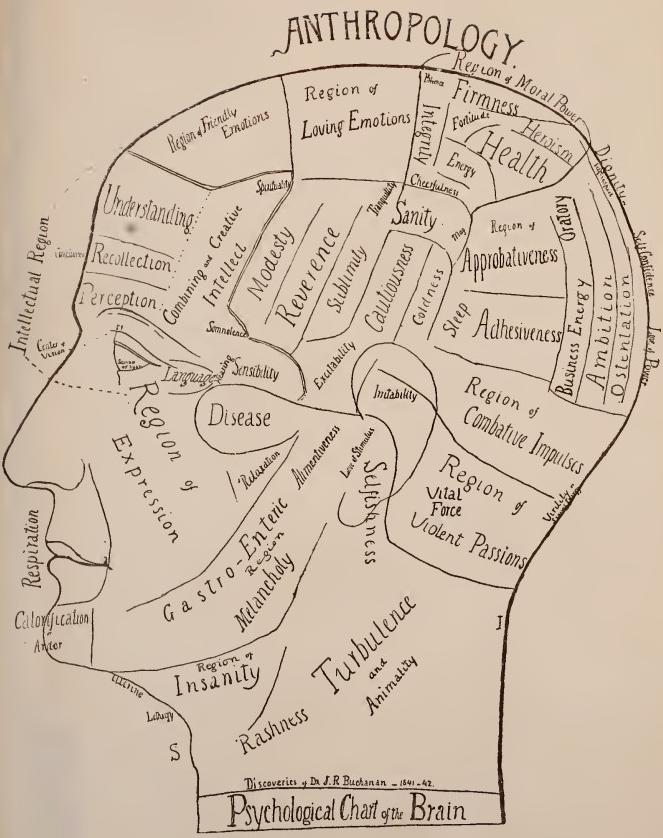
THE sketch of the spinal column is presented to illustrate the chapter on the spinal region.

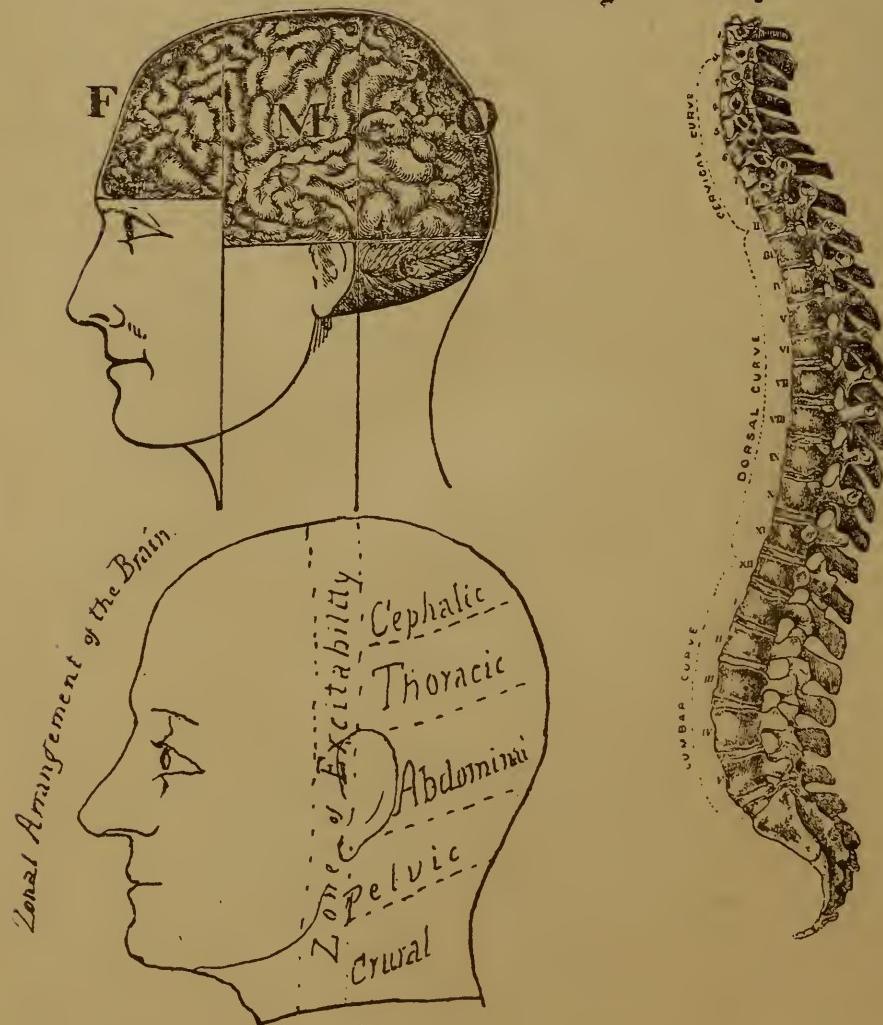
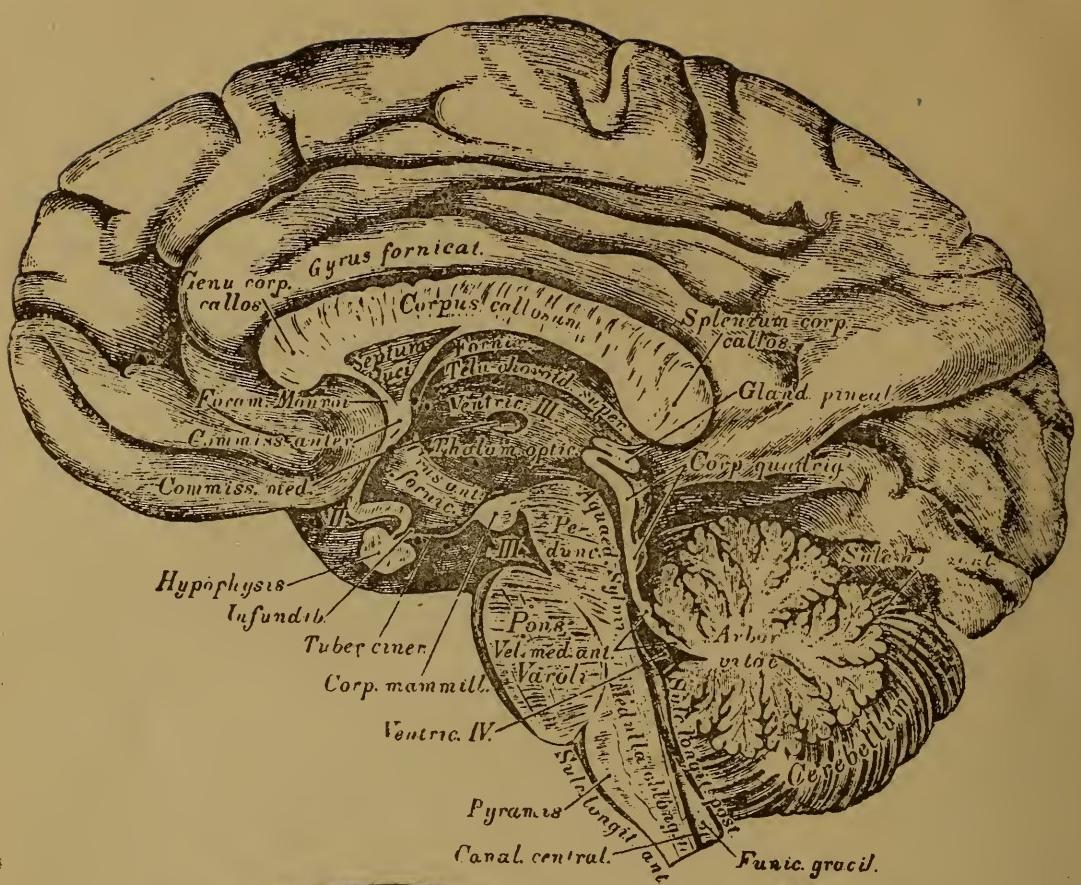
The profile of the head exhibits the position of the brain in the cranium and its three regions, frontal F, middle M, and occipital, O. The cerebellum is seen under the occiput and behind the ear.

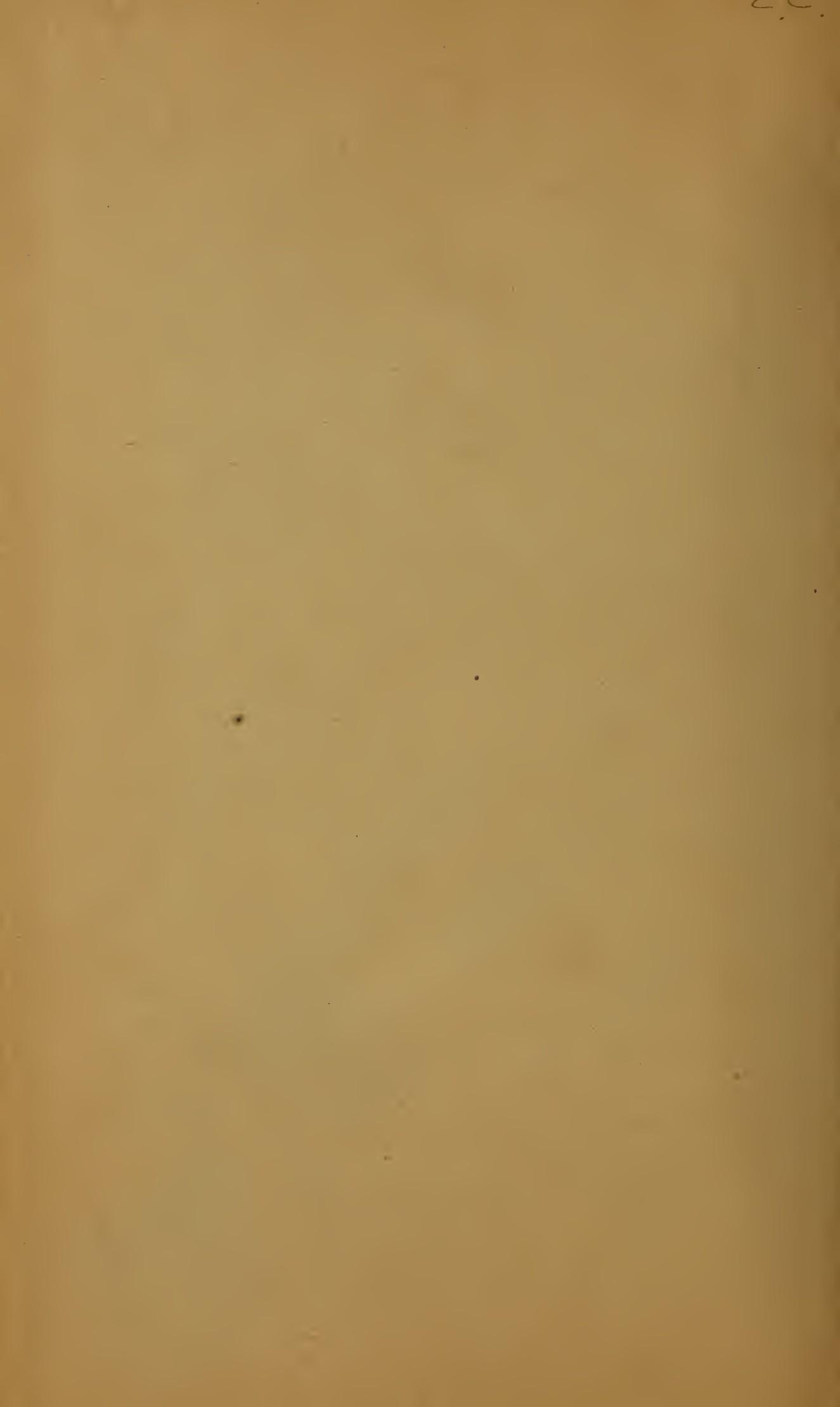
The Zonal arrangement of the brain exhibits its sympathy with the different regions of the body, as explained in Chapter VI.

The view of the brain exhibits the interior of the right hemisphere, divided from the left, along the median line. This view is important in understanding the relations of the soul and the doctrine of influx. The most intimate relations of the soul and channels of its influx are found on the median line, as shown in this section. In the pineal gland, septum lucidum, mammillary body and intermediate strutures are located the highest spiritual powers and channels of influx.

THE DOGMA









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